Biology

Q.1	Test 3 Bioenergetics B	Biology Unit Wise

Number of steps involved in release of CO_2 during Krebs cycle are:

(a) 1   (b) 2
(c) 6   (d) 12

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Correct Answer:

○ A   ○ B   ○ C   ○ D

Next

Time Remaining: 44/45 (Minutes)

Q.2   Test 3 Bioenergetics B   Biology Unit Wise

Number of carbon atoms present in citric acid, oxaloacetic acid and pyruvic acid are respectively:

(a) 6, 3 & 3   (b) 6, 4 & 3
(c) 5, 4 & 3   (d) 6, 4 & 2

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Correct Answer:

○ A   ○ B   ○ C   ○ D

Next

Back

Time Remaining: 44/45 (Minutes)

Q.3	Test 3 Bioenergetics B	Biology Unit Wise

Aerobic respiration of one glucose produces:

(a) 12 NADH + 2FADH$_2$ + 38 ATP
(b) 12 NADH + 30 ATP + H$_2$O
(c) 8 NADH + 2FADH$_2$ + 2ATP
(d) 10 NADH + 2 FADH$_2$ + 2 ATP + 2 GTP

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Correct Answer:

● A ● B ● C ● D

Next

Back

Time Remaining: 44/45 (Minutes)

Q.4   Test 3 Bioenergetics B   Biology Unit Wise

Which of the following is correct regarding citric acid cycle?

(a) The cycle consumes acetate and water
(b) The cycle reduces NAD+ to NADH
(c) The cycle produces carbon dioxide as a waste byproduct
(d) All the above

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Correct Answer:

○ A   ○ B   ○ C   ○ D

Next

Back

Time Remaining: 44/45 (Minutes)

Q.5   Test 3 Bioenergetics B   Biology Unit Wise

In eukaryotic cells, the citric acid cycle occurs:

(a) In the matrix of the mitochondrion
(b) In F1 particles
(c) On the inner surface of inner mitochondrial membrane
(d) In the inter-membranous space of the mitochondrion

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Correct Answer:

○ A   ○ B   ○ C   ○ D

Next

Back

Time Remaining: 44/45 (Minutes)

| Q.6 | Test 3 Bioenergetics B | Biology Unit Wise |

For each acetyl-CoA entering the cycle, the number of carbon dioxide molecules formed is:

(a) One   (b) Two
(c) Four   (d) Zero

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Correct Answer:

○ A   ● B   ● C   ● D

Next

Back

Time Remaining: 43/45 (Minutes)

Q.7	Test 3 Bioenergetics B	Biology Unit Wise

How many times does the Krebs cycle turn per glucose molecule?

(a) Once   (b) Twice
(c) Three times   (d) Four times

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Correct Answer:

○ A   ○ B   ○ C   ○ D

Next

Back

Time Remaining: 43/45 (Minutes)

Q.8 | Test 3 Bioenergetics B | Biology Unit Wise

Number of ATPs obtained from 1 GTP during one Kreb's cycle is:

(a) 1   (b) 2

(c) 3   (d) 6

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Correct Answer:

○ A   ○ B   ○ C   ○ D

Next

Back

Time Remaining: 43/45 (Minutes)

Q.9   Test 3 Bioenergetics B   Biology Unit Wise

Number of oxygen molecules required for glycolytic breakdown of one glucose molecule is:

(a) Three   (b) Zero

(c) Thirty eight   (d) Six

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Correct Answer:

A   B   C   D

Next

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Time Remaining: 43/45 (Minutes)
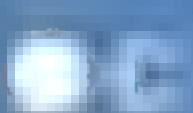
Q.10	Test 3 Bioenergetics B	Biology Unit Wise

During respiration, terminal oxidation means:

(a) Electron transport
(b) Synthesis of ATP
(c) Formation of water
(d) Dehydrogenation of reaction

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Correct Answer:

○ A   ○ B   ○ C   ○ D

Next

Back

Time Remaining: 43/45 (Minutes)

Q.11	Test 3 Bioenergetics B	Biology Unit Wise

In ETC, cytochromes are arranged in series of:

(a) Cytochrome a → Cytochrome a_3 → Cytochrome b → Cytochrome c

(b) Cytochrome b → Cytochrome a_3 → Cytochrome a → Cytochrome c

(c) Cytochrome b → Cytochrome c → Cytochrome a → Cytochrome a_3

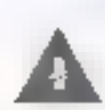(d) Cytochrome b → Cytochrome a_3 → Cytochrome a → Cytochrome c

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Correct Answer:

○ A   ○ B   ○ C   ○ D

Next

Back

Time Remaining: 43/45 (Minutes)

Test 3 Bioenergetics B   Biology Unit Wise

In oxidative phosphorylation, one molecule of reduced FAD produces, how many ATP?

(a) Zero   (b) Two
(c) Three   (d) Four

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Correct Answer

○ A   ○ B   ○ C   ○ D

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Back

Q.13	Test 3 Bioenergetics B	Biology Unit Wise

End product of citric acid/Krebs cycle is:

(a) Citric acid   (b) Lactic acid
(c) Pyruvic acid   (d) CO_2

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Correct Answer:

○ A   ○ B   ○ C   ○ D

Next

Back

Test 3 Bioenergetics B   Biology Unit Wise

Fructose-6-phosphate is changed to fructose-1,6-bisphosphate by:

(a) Phosphoglycerate   (b) Phosphatase
(c) Phosphofructokinase   (d) Enolase

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Correct Answer:

A   B   C   D

Next

Back

Time Remaining 42/45 (Minutes)

	Test 3 Bioenergetics B	Biology Unit Wise

How may ATP will be produced during the production of one molecule of acetyl-CoA from one molecule of pyruvic acid?

(a) 3 ATP (b) 5 ATP
(c) 8 ATP (d) 38 ATP

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Correct Answer:

○A ●B ●C ○D

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Time Remaining 42/45 (Minutes)

Test 3 Bioenergetics B   **Biology Unit Wise**

Largest amount of phosphate bond energy is produced in the process of respiration during:

(a) Glycolysis
(b) Krebs cycle
(c) Anaerobic respiration
(d) None of the above

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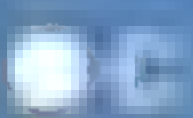
Correct Answer:

A   B   C   D

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Time Remaining 42/45 (Minutes)
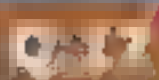
Test 3 Bioenergetics B   **Biology Unit Wise**

Number of ATP molecules which can be built on complete oxidation of pyruvic acid is:

(a) 6   (b) 2

(c) 15   (d) 30

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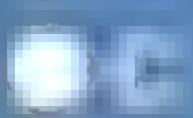
Correct Answer:

A   B   C   D

Next

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Time Remaining 42/45 (Minutes)

Test 3 Bioenergetics B	Biology Unit Wise

Number of carbon atoms available in acetyl-CoA is:

(a) 6　　　　　　　　　　(b) 4
(c) 3　　　　　　　　　　(d) 2

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Correct Answer:

A　　B　　C　　D

Next

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Time Remaining: 42/45 (Minutes)

Test 3 Bioenergetics B   Biology Unit Wise

The energy yield as a result of total oxidation of one molecule of glucose during cellular respiration is sufficient to convert:

(a) 30 molecules of ADP to 30 molecules of ATP
(b) 32 molecules of ADP to 32 molecules of ATP
(c) 36 molecules of ADP to 36 molecules of ATP
(d) 38 molecules of ADP to 38 molecules of ATP

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Correct Answer:

●A ●B ●C ●D

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Time Remaining 42/45 (Minutes)

Q.20 Test 3 Bioenergetics B   Biology Unit Wise

As compared to anaerobic respiration the energy gained during aerobic respiration is _____ more:

(a) 6 times   (b) 12 times
(c) 18 times   (d) 36 times

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Correct Answer:

○ A   ● B   ○ C   ○ D

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Time Remaining 42/45 (Minutes)

Qn1   Test 3 Bioenergetics B   Biology Unit Wise

Oxidation of pyruvate to CO_2 and H_2O occurs through:

(a) Citric acid cycle   (b) Tricarboxylic cycle
(c) Krebs cycle   (d) All the above

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Correct Answer:

●A ●B ●C ●D

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Time Remaining: 41/45 (Minutes)

Q.22   Test 3 Bioenergetics B   Biology Unit Wise

The terminal cytochrome in respiratory chain is:

(a) Cytochrome b   (b) Cytochrome a_3
(c) Cytochrome a   (d) Cytochrome c

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Correct Answer:

A   B   C   D

Next

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Test 3 Bioenergetics B   **Biology Unit Wise**

The net gain of energy from one gram mole of glucose during aerobic respiration is:

(a) 2 ATP   (b) 4 ATP
(c) 36 ATP   (d) 38 ATP

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Correct Answer

○ A   ○ B   ○ C   ○ D

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Q#24   Test 3 Bioenergetics B   Biology Unit Wise

The first decarboxylation of aerobic respiration occurs during:

(a) Glycolysis
(b) Pyruvic acid oxidation
(c) Krebs cycle
(d) Respiratory chain

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Correct Answer:

○ A   ○ B   ○ C   ○ D

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Q.25 Test 3 Bioenergetics B Biology Unit Wise

Total number of decarboxylation during aerobic respiration of one glucose:

(a) 2 (b) 4
(c) 6 (d) 8

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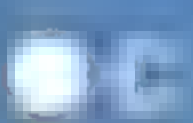
Correct Answer:

○ A ○ B ○ C ○ D

Next

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Time Remaining: 41/45 (Minutes)

Q#26   **Test 3 Bioenergetics B**   **Biology Unit Wise**

Water molecules released during pyruvic acid oxidations is:

(a) 0   (b) 1

(c) 2   (d) 4

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Correct Answer:

A   B   C   D

Next

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Time Remaining: 41/45 (Minutes)

Qu2   Test 3 Bioenergetics B   Biology Unit Wise

First NADH of aerobic respiration is produced during:

(a) Glycolysis
(b) Pyruvic acid oxidation
(c) Krebs cycle
(d) Respiratory chain

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Correct Answer:

A   B   C   D

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Time Remaining: 41/45 (Minutes)

| OMS | Test 3 Bioenergetics B | Biology Unit Wise |

Which of the following enzyme catalyzes the first step of glycolysis?

(a) Hexokinase
(b) Pyruvate kinase
(c) Isomerase
(d) Phosphofructokinase

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Correct Answer:

●A ●B ●C ●D

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Q.29 Test 3 Bioenergetics B   Biology Unit Wise

The general term used for the anaerobic degradation of glucose to obtain energy is

(a) Anabolism (b) Oxidation
(c) Fermentation (d) Metabolism

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Correct Answer:

A B C D

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Time Remaining: 40/45 (Minutes)

Q.30 | Test 3 Bioenergetics B | Biology Unit Wise

Cleavage of fructose-1,6-biophosphate yields

(a) Two aldoses   (b) Two ketoses
(c) An aldose & a ketose (d) Only a ketose

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Correct Answer:

○ A   ○ B   ○ C   ○ D

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Time Remaining 40/45 (Minutes)

Q.31 Test 3 Bioenergetics B Biology Unit Wise

Dihydroxyacetone phosphate is rapidly and reversibly converted to

(a) Glyceraldehyde 3-phosphate
(b) 1,3-bis-phosphoglycerate
(c) Fructose-1,6-bisphosphate
(d) Fructose-6-phosphate

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Correct Answer:

○ A ○ B ○ C ○ D

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Q.32   Test 3 Bioenergetics B   Biology Unit Wise

The substrate used in the last step of glycolysis is

(a) Glyceraldehyde 3-phosphate
(b) Pyruvate
(c) Phosphoenolpyruvate
(d) 1,3-bisphosphoglycerate

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Correct Answer:

○ A   ○ B   ○ C   ○ D
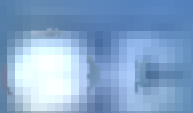
Next

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Time Remaining 40/45 (Minutes)

Q.33	Test 3 Bioenergetics B	Biology Unit Wise

Glycolysis converts

(a) Glucose into pyruvate
(b) Glucose into phosphoenolpyruvate
(c) Fructose into pyruvate
(d) Fructose into phosphoenolpyruvate

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Correct Answer:

○ A ○ B ○ C ○ D

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60 Ks 98

Time Remaining 40/45 (Minutes)

Q.34	Test 3 Bioenergetics B	Biology Unit Wise

The product formed in the first substrate level phosphorylation in glycolysis is:

(a) Pyruvate
(b) 3-phosphoglycerate
(c) 1,3-bisphosphoglycerate
(d) 2-phosphoglycerate

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Correct Answer:

○ A ○ B ○ C ○ D

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Time Remaining 39/45 (Minutes)

Q35	Test 3 Bioenergetics B	Biology Unit Wise

The enzymes that take part in Krebs cycle are part of:

(a) Mitochondria
(b) Inner mitochondrial membrane
(c) Mitochondrial matrix
(d) Cytoplasm

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Correct Answer:

● A ● B ● C ● D
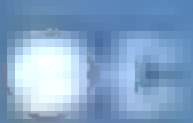
Next

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Time Remaining: 39/45 (Minutes)

Q36   Test 3 Bioenergetics B   Biology Unit Wise

In glycolysis, phosphofructokinase (PFK) is inhibited by:

(a) NADH
(b) ATP
(c) Fructose-1,6-bisphosphate
(d) Fructose-6-phosphate

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Correct Answer:

○ A   ○ B   ○ C   ○ D

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Time Remaining 39/45 (Minutes)

Q32	Test 3 Bioenergetics B	Biology Unit Wise

The pyruvate decarboxylase is inhibited by:

(a) NADH   (b) CO_2
(c) ATP   (d) Acetyl-CoA

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Correct Answer:

● A   ● B   ● C   ● D

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Q38 Test 3 Bioenergetics B Biology Unit Wise

The products of glycolysis is/are:

(a) Pyruvate (b) NADH
(c) ATP (d) All the above

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Correct Answer:

A B C D

Next

Back

Time Remaining 39/45 (Minutes)

Q.39 Test 3 Bioenergetics B Biology Unit Wise

During respirator chain, NADH is oxidized by:

(a) Cytochrome b (b) Cytochrome a
(c) Molecular O_2 (d) Coenzyme Q

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Correct Answer:

● A ● B ● C ● D

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Q40   Test 3 Bioenergetics B   Biology Unit Wise

Which of the following is wrong with respect to the Krebs cycle?

(a) Acetyl-CoA combines with oxaloacetate to form citrate

(b) NAD^+ is reduced to form NADH

(c) $FADH_2$ accepts two electrons in order to form FAD

(d) All of the above are correct

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Correct Answer:

A   B   C   D

Submit Quiz

Back

Number of steps involved in
release of CO_2 during
Krebs cycle are:
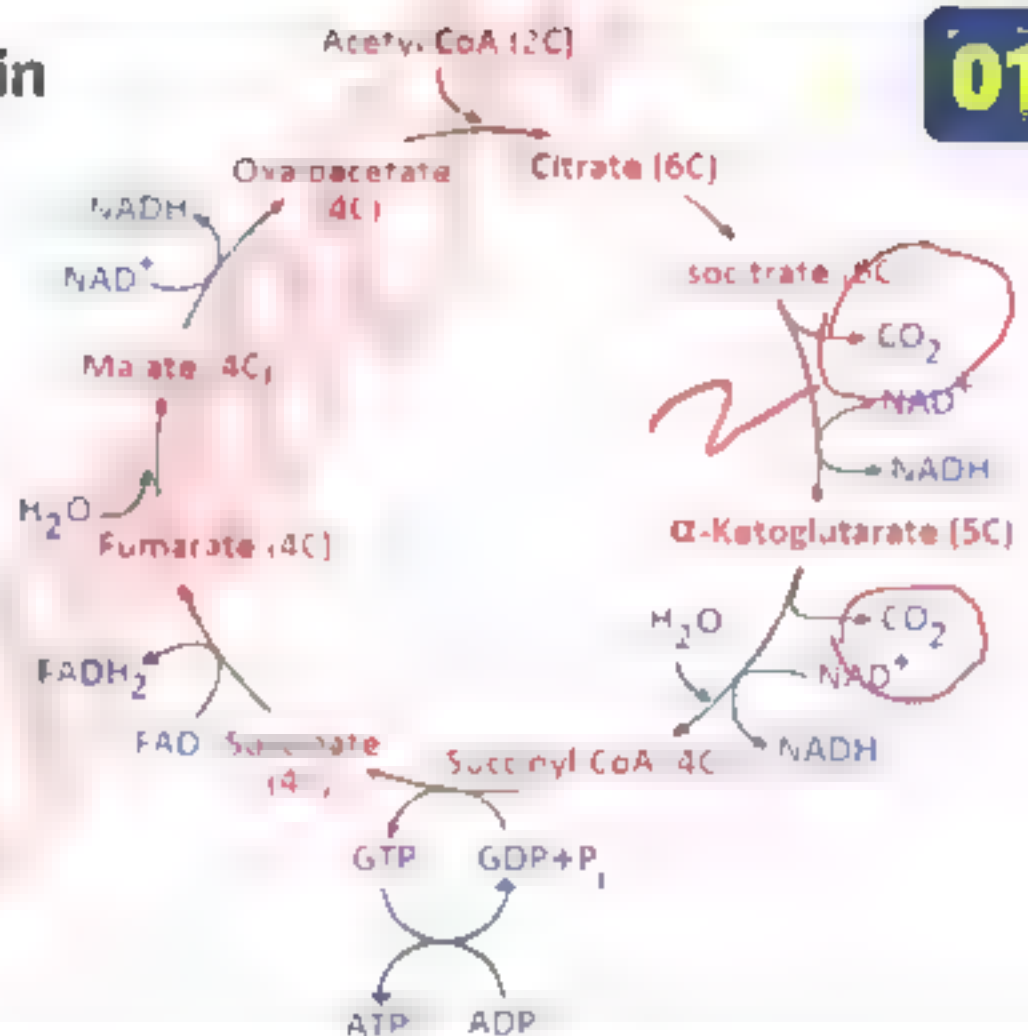
(a) 1
(b) 2
(c) 6
(d) 12

01

Acetyl CoA (2C)

Oxaloacetate (4C)   Citrate (6C)

NADH

NAD⁺

Isocitrate (6C)

CO_2

NAD⁺

Malate (4C)

NADH

H_2O

Fumarate (4C)

α-Ketoglutarate (5C)

H_2O CO_2

FADH₂

NAD⁺

FAD Succinate (4C)   Succinyl CoA (4C)   NADH

GTP   GDP+Pᵢ

ATP   ADP

Number of carbon atoms present in citric acid, oxaloacetic acid and pyruvic acid are respectively:

(a) 6, 3 & 3
(b) 6, 4 & 3
(c) 5, 4 & 3
(d) 6, 4 & 2

02

Acetyl CoA (2C)

Oxaloacetate (4C)

Citrate (6C)

NADH

NAD⁺

Isocitrate (6C)

Malate (4C)

CO_2

NAD⁺

NADH

H_2O

Fumarate (4C)

α Ketoglutarate (5C)

FADH₂

H_2O

CO_2

NAD⁺

NADH

FAD Succinate (4C)

Succinyl CoA (4C)

GTP   GDP+P

ATP   ADP
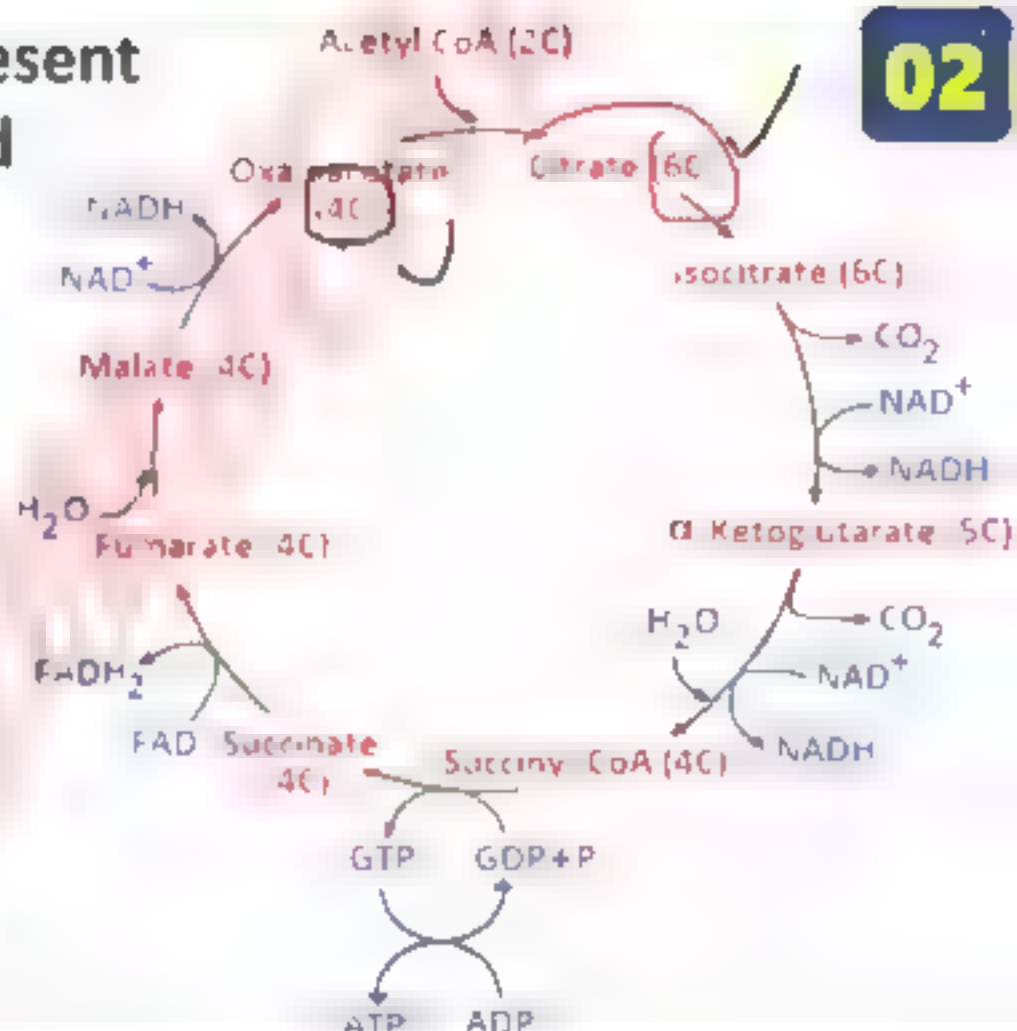
Aerobic respiration of one glucose produces: **03**
(a) 12 NADH + 2FADH$_2$ + 38 ATP
(b) 12 NADH + 30 ATP + H2O
(c) 8 NADH + 2FADH$_2$ + 2ATP
(d) 10 NADH + 2 FADH$_2$ + 2 ATP + 2 GTP

Acetyl CoA (2C)

Oxaloacetate (4C)

Citrate (6C)

NADH

NAD^+

Isocitrate (6C)

Malate (4C)

CO_2

NAD^+

NADH

H_2O

Fumarate (4C)

α-Ketoglutarate (5C)

$FADH_2$

H_2O

CO_2

NAD^+

FAD   Succinate (4C)

NADH

Succinyl CoA (4C)

GTP $GDP + P_i$

ATP   ADP

Acetyl CoA (2C)

Oxaloacetate (4C)

Citrate (6C)

NADH

NAD^+

socitrate (6C)

CO_2

NAD^+

NADH

Malate (4C)

H_2O

Fumarate (4C)

α-Ketoglutarate (5C)

H_2O

CO_2

NAD^+

NADH

$FADH_2$

FAD   Succinate (4C)

Succinyl-CoA (4C)

GTP $GDP+P_i$

ATP   ADP
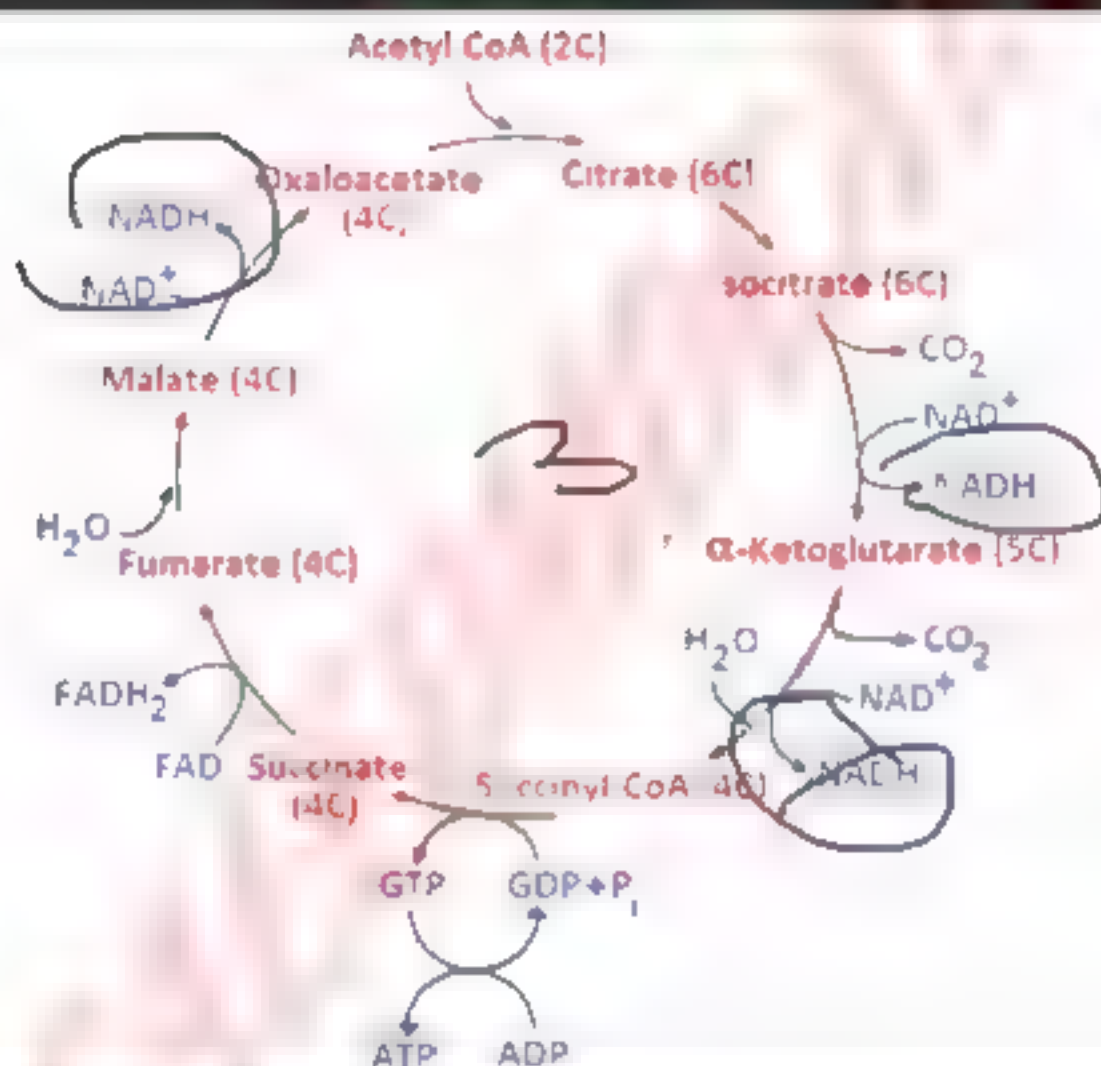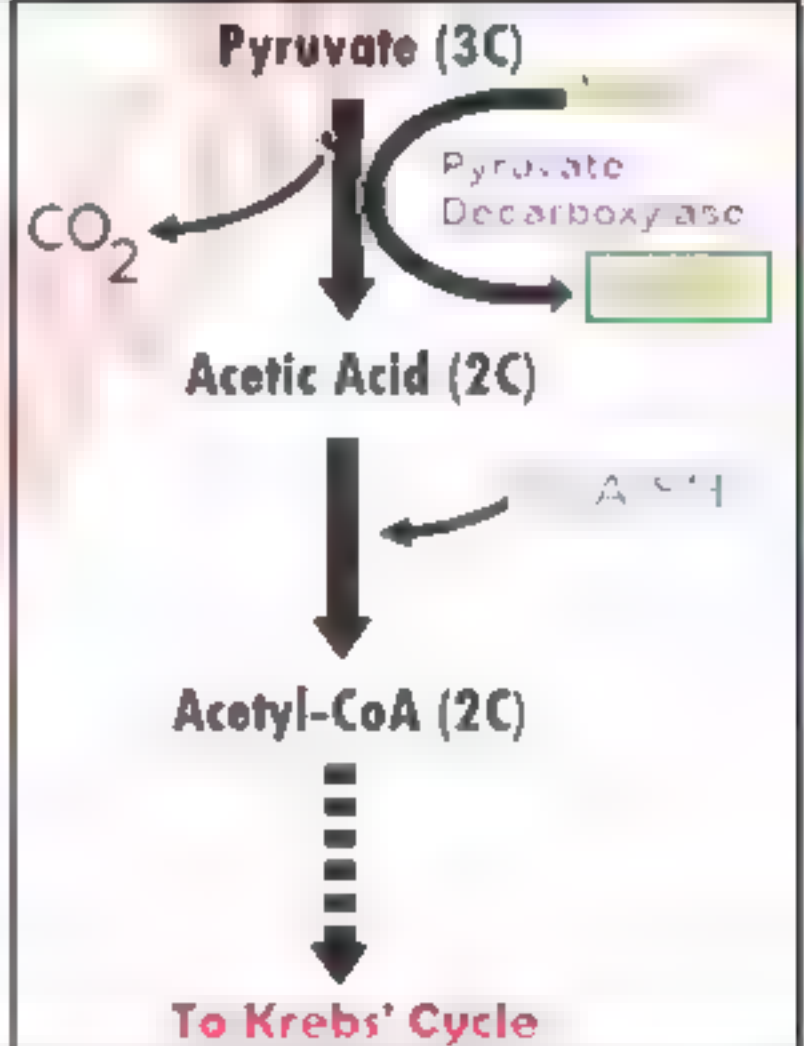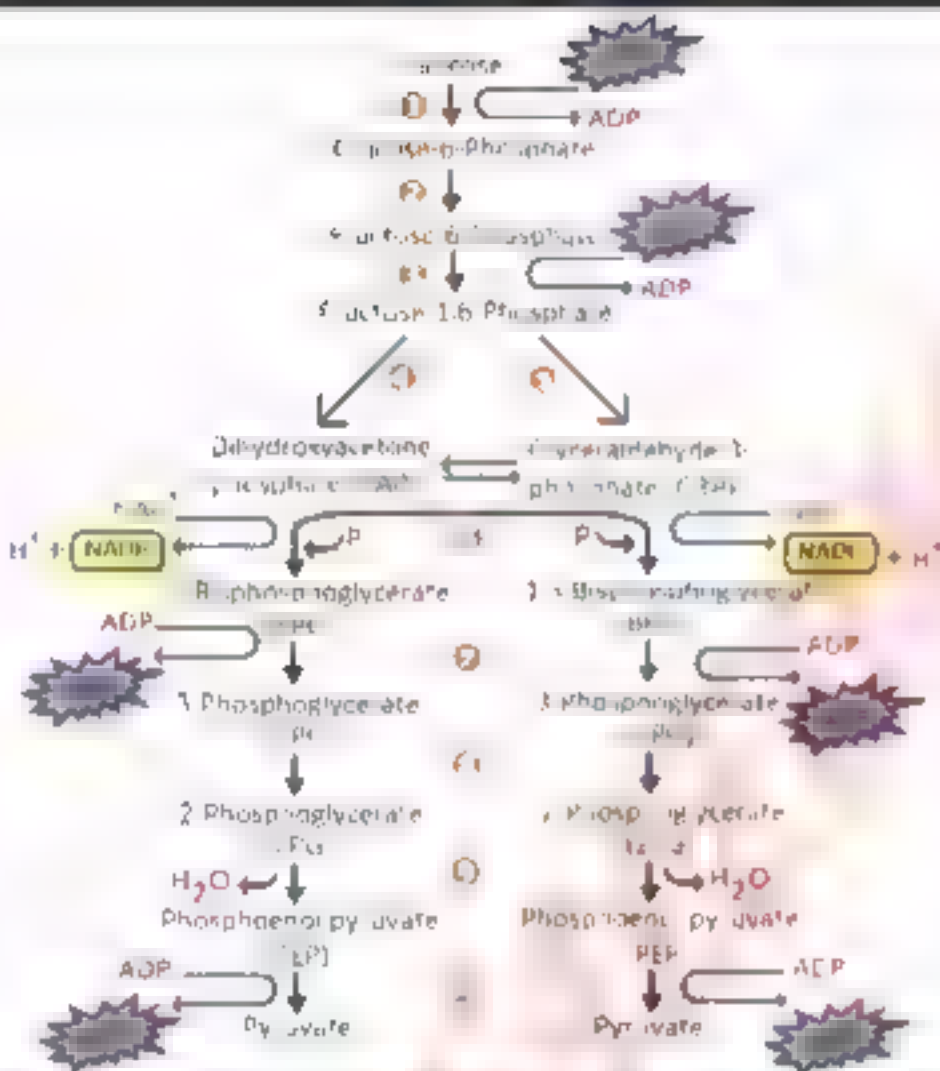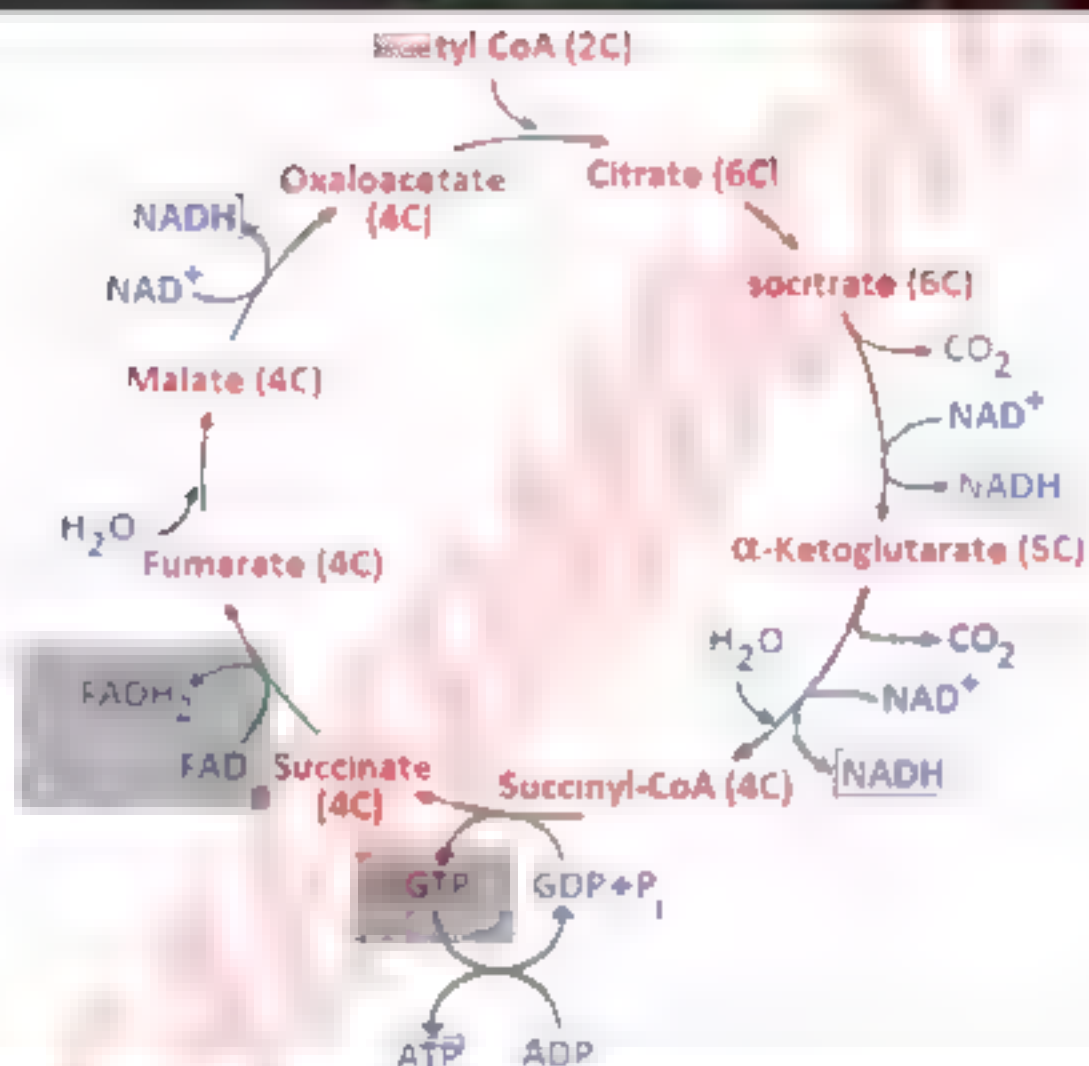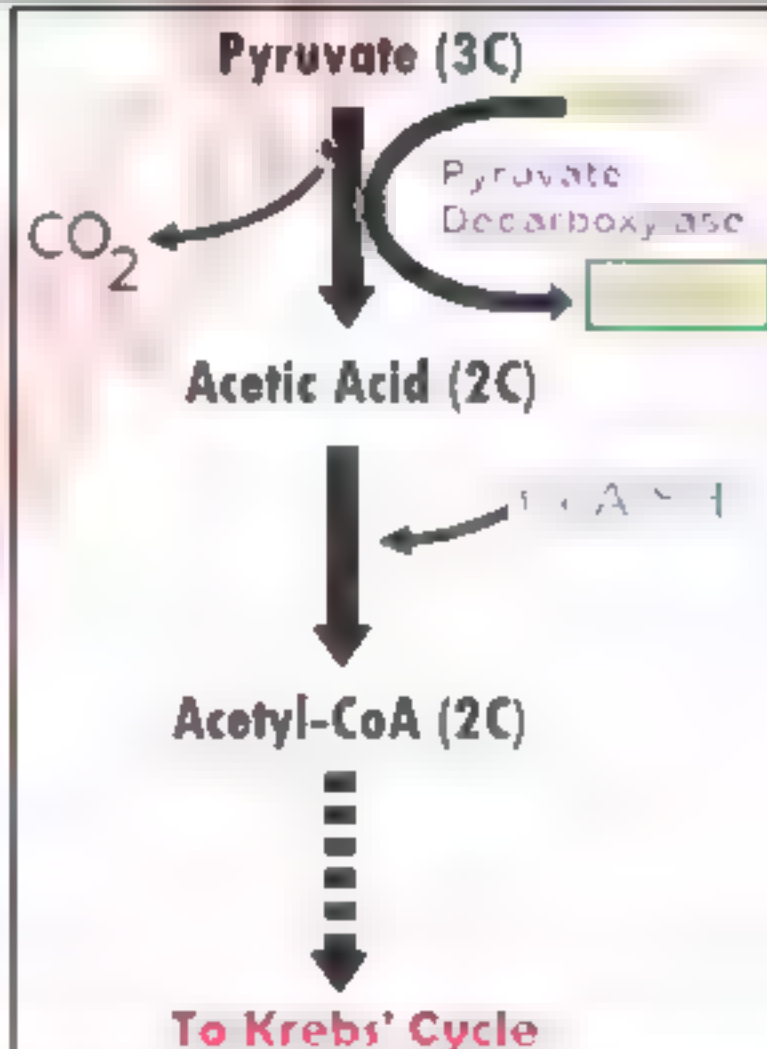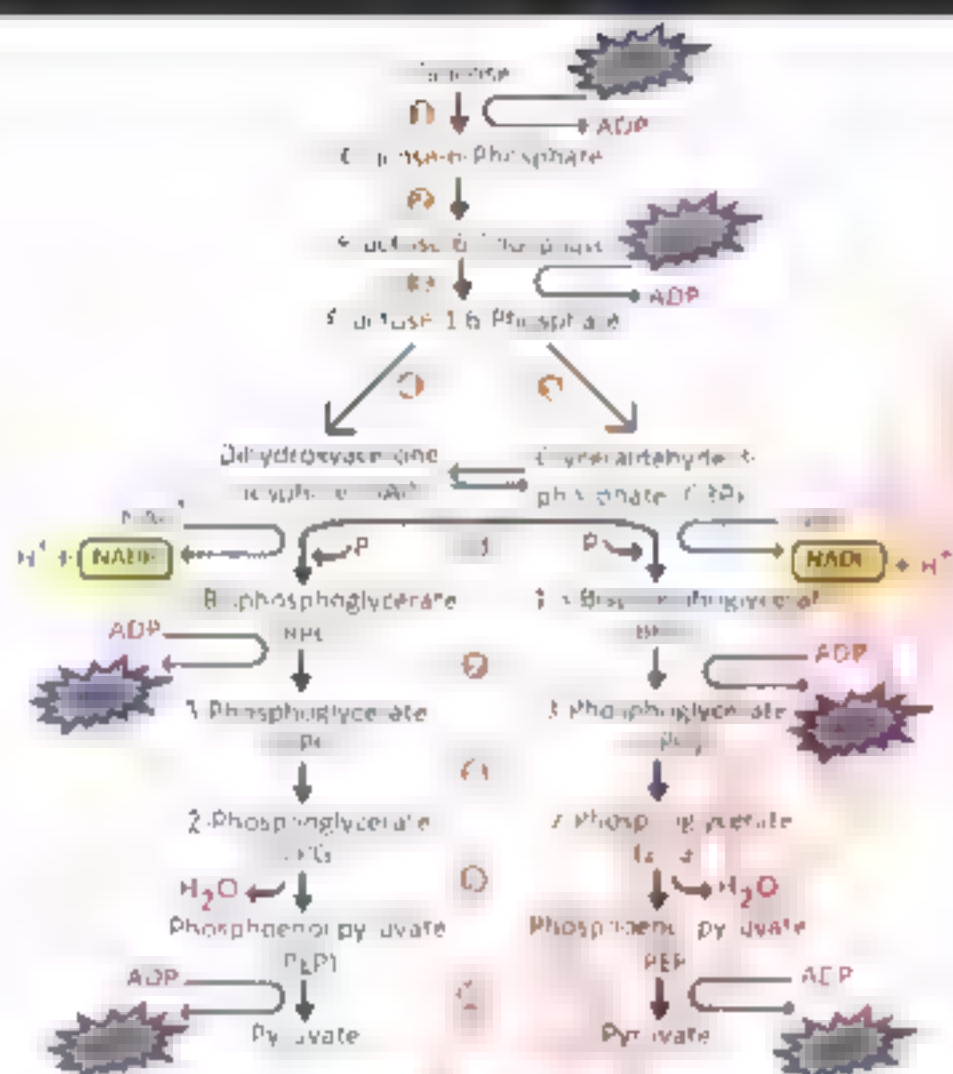
Which of the following is correct regarding citric acid cycle?

04

(a) The cycle consumes acetate and water
(b) The cycle reduces NAD^+ to NADH
(c) The cycle produces carbon dioxide as a waste byproduct
(d) All the above

Acetyl CoA (2C)

Oxaloacetate (4C)   Citrate (6C)

NADH
NAD⁺

Isocitrate (6C)

Malate (4C) CO_2 NAD⁺   NADH

H_2O Fumarate (4C)   α-Ketoglutarate (5C)

FADH₂ H_2O CO_2 NAD⁺

FAD Succinate (4C)   Succinyl-CoA (4C)   NADH

GTP   GDP+P_i

ATP   ADP
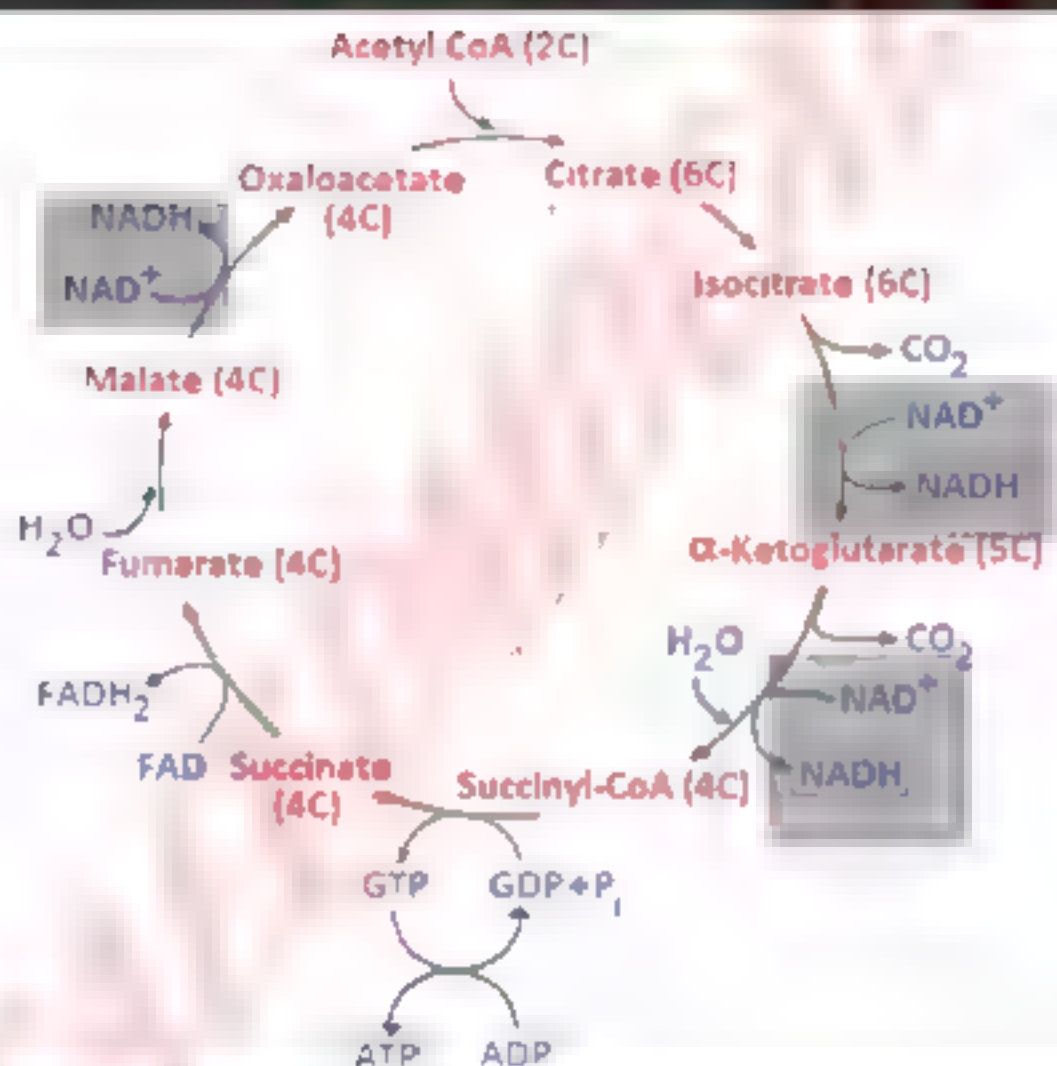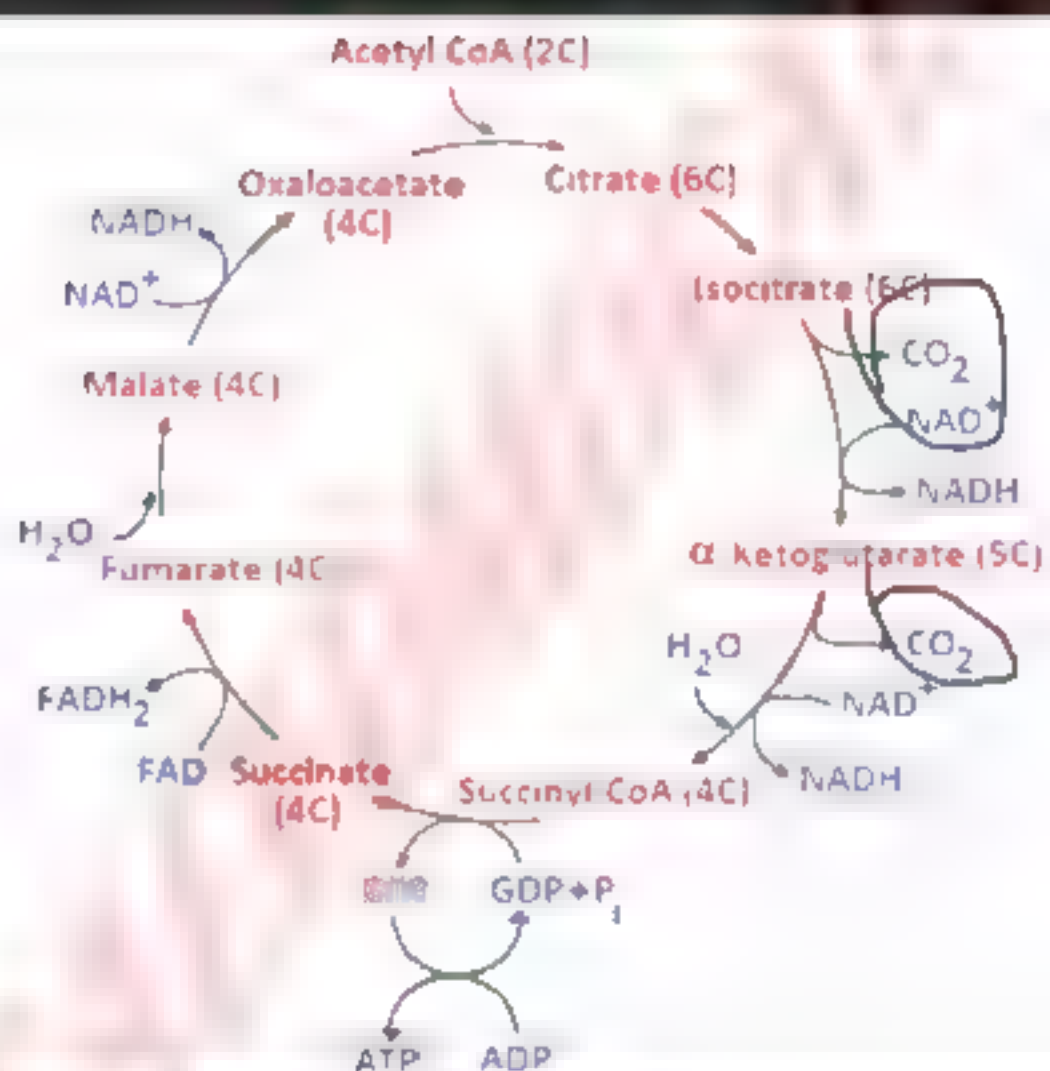
In eukaryotic cells, the citric acid cycle occurs: **05**

(a) In the matrix of the mitochondrion

(b) In F_1 particles

(c) On the inner surface of inner mitochondrial membrane

(d) In the inter-membranous space of the mitochondrion

For each acetyl-CoA entering the cycle, the number of carbon dioxide molecules formed is:

(a) One

(b) Two

(c) Four

(d) Zero

06

Acetyl CoA (2C)

Oxaloacetate (4C) — Citrate (6C)

NADH
NAD⁺

Isocitrate (6C)

Malate (4C)

CO_2
NAD⁺
NADH

H_2O
Fumarate (4C)

α-Ketoglutarate (5C)

FADH₂

H_2O
CO_2
NAD⁺
NADH

FAD Succinate (4C) — Succinyl CoA (4C)

GTP   GDP+P

ATP   ADP
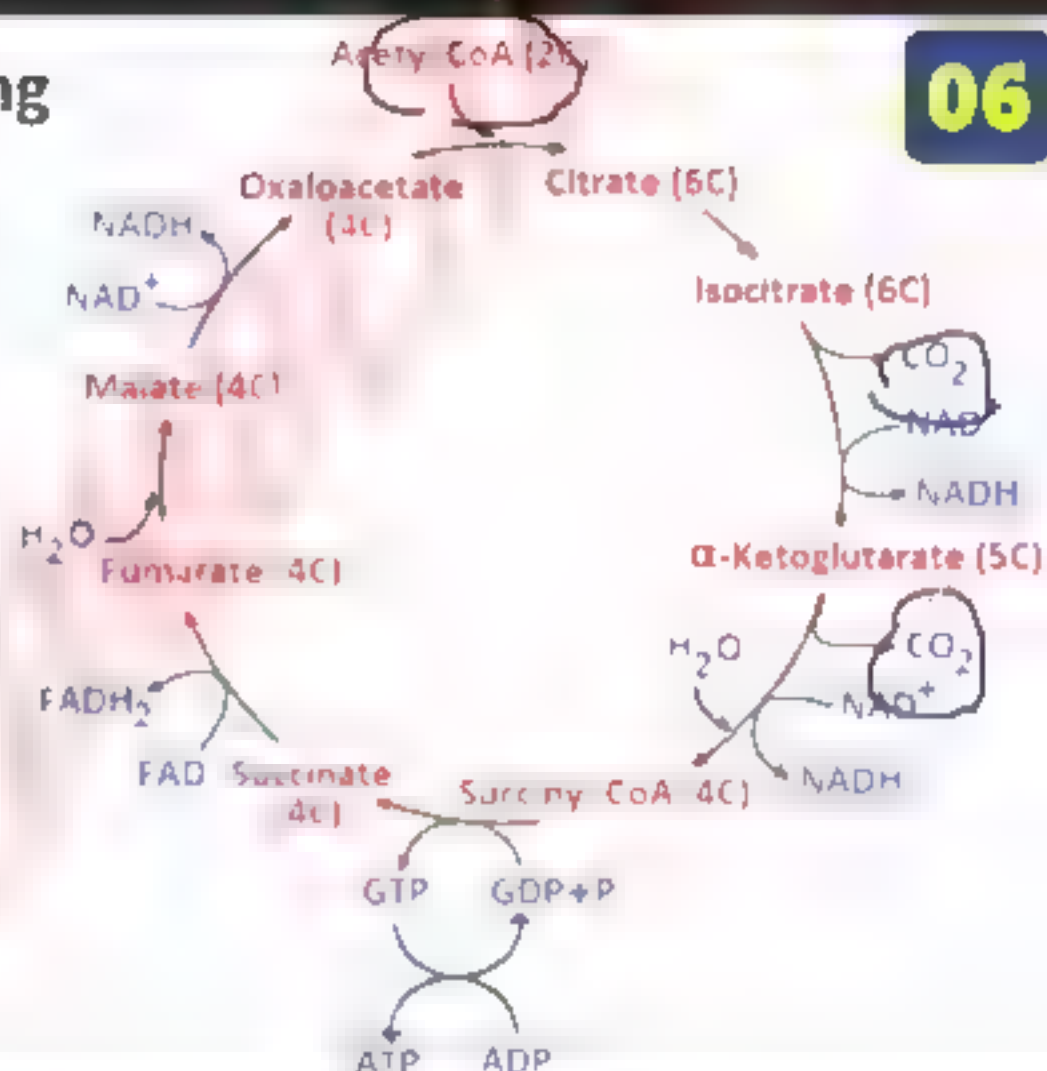
How many times does the Krebs cycle turn per glucose molecule? **07**

(a) Once
(b) Twice
(c) Three times
(d) Four times

Number of ATPs obtained from 1 GTP during one Kreb's cycle is:

(a) 1
(b) 2
(c) 3
(d) 6

08

Number of oxygen molecules required for glycolytic breakdown of one glucose molecule is:

(a) Three
(b) Zero
(c) Thirty eight
(d) Six

09

During respiration, terminal oxidation means:

(a) Electron transport

(b) Synthesis of ATP

(c) **Formation of water**

(d) Dehydrogenation of reaction
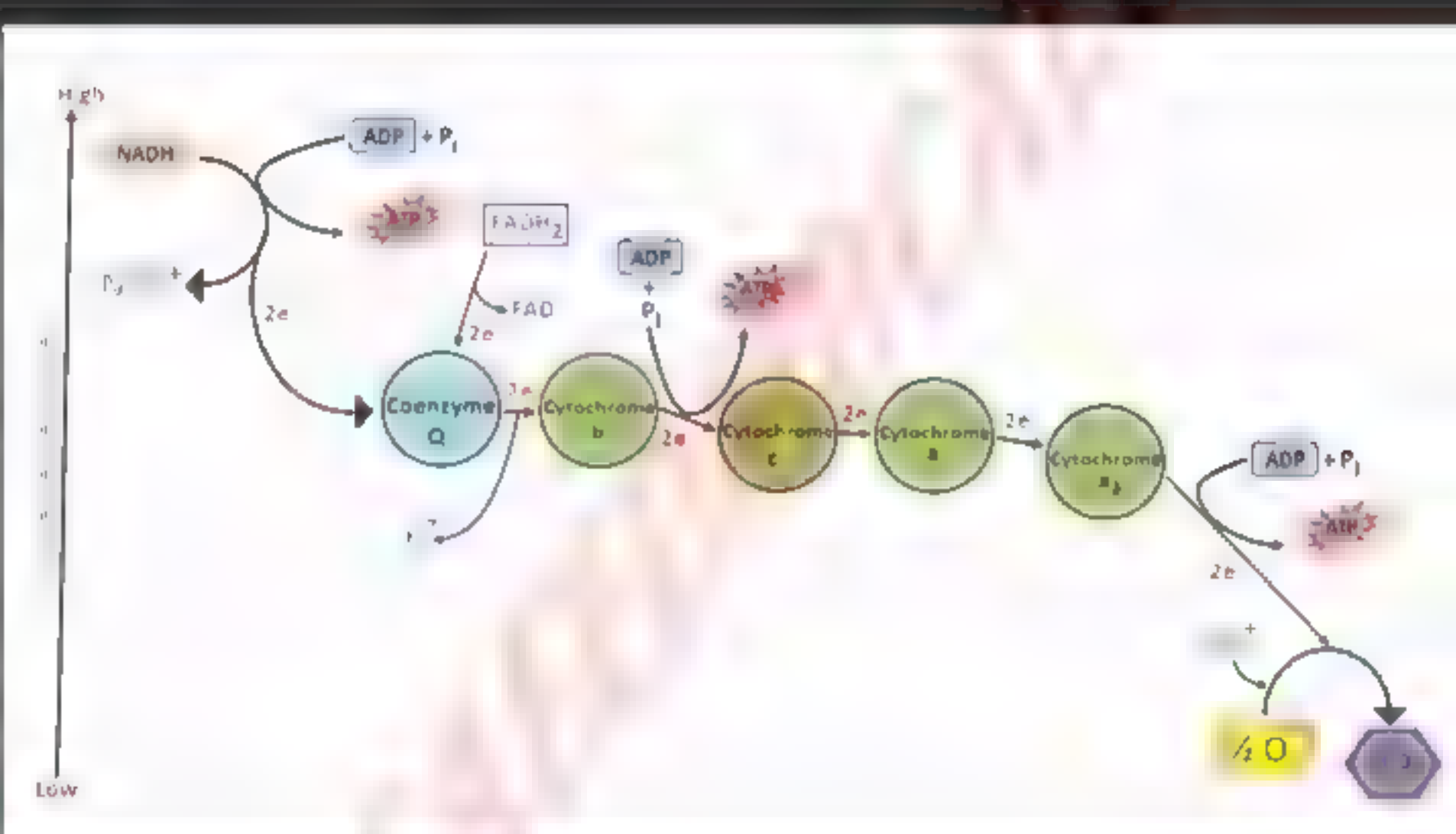
In ETC, cytochromes are arranged in series of: [11]

(a) Cytochrome a → Cytochrome a_3 → Cytochrome b → Cytochrome c

(b) Cytochrome b → Cytochrome a_3 → Cytochrome a → Cytochrome c

(c) Cytochrome b → Cytochrome c → Cytochrome a → Cytochrome a_3

(d) Cytochrome b → Cytochrome a_3 → Cytochrome a → Cytochrome c

In oxidative phosphorylation, one molecule of reduced FAD produces, how many ATP?

12

(a) Zero
(b) Two
(c) Three
(d) Four

End product of citric acid/Krebs cycle is:

13
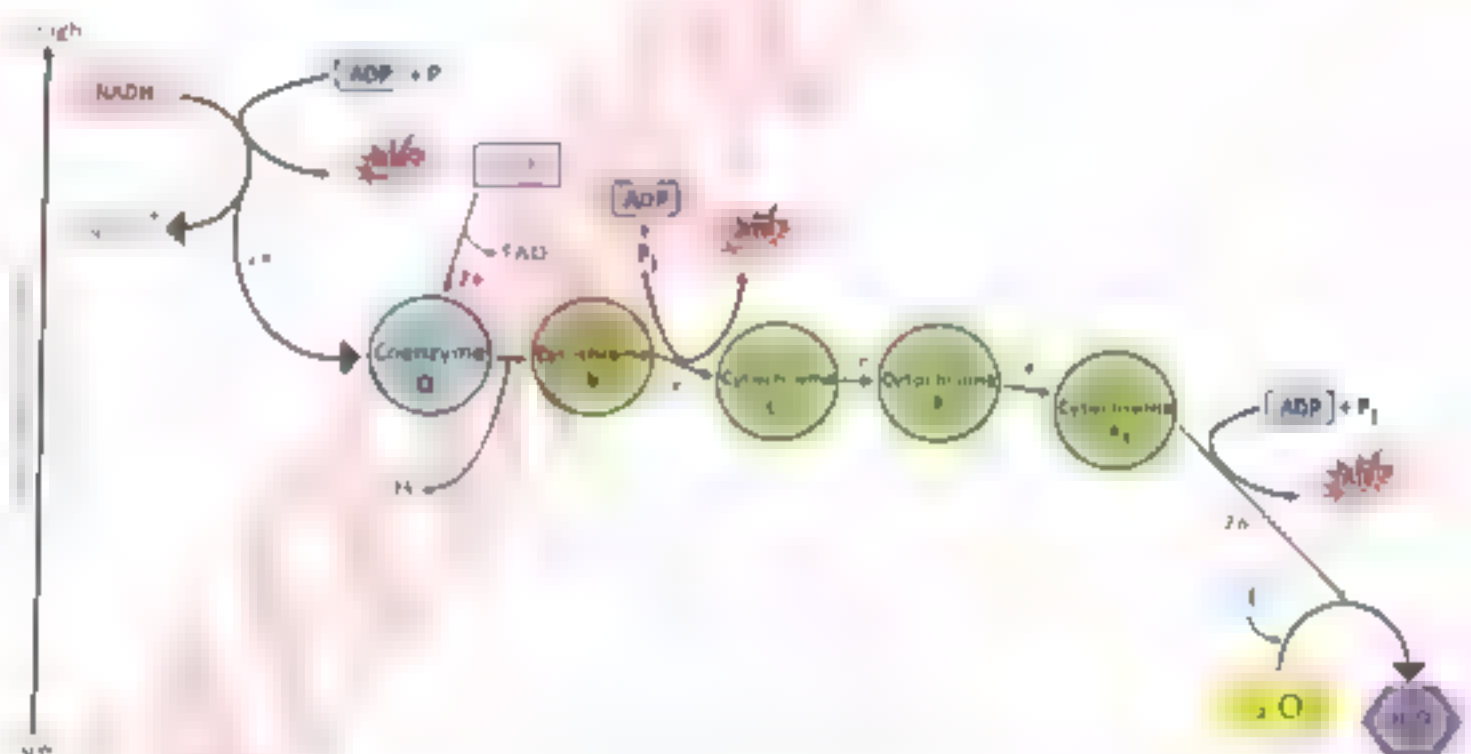
(a) Citric acid
(b) Lactic acid
(c) Pyruvic acid
(d) CO$_2$
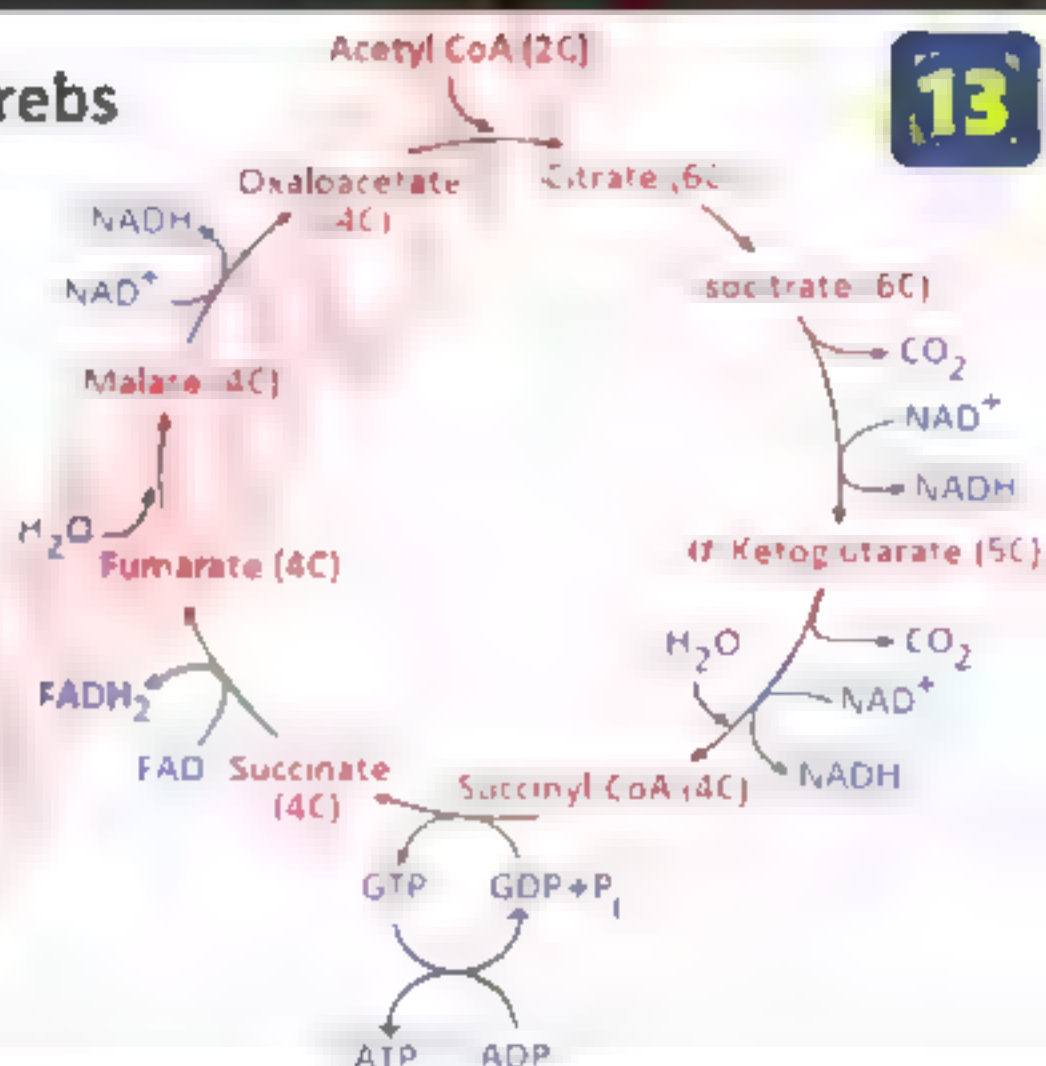
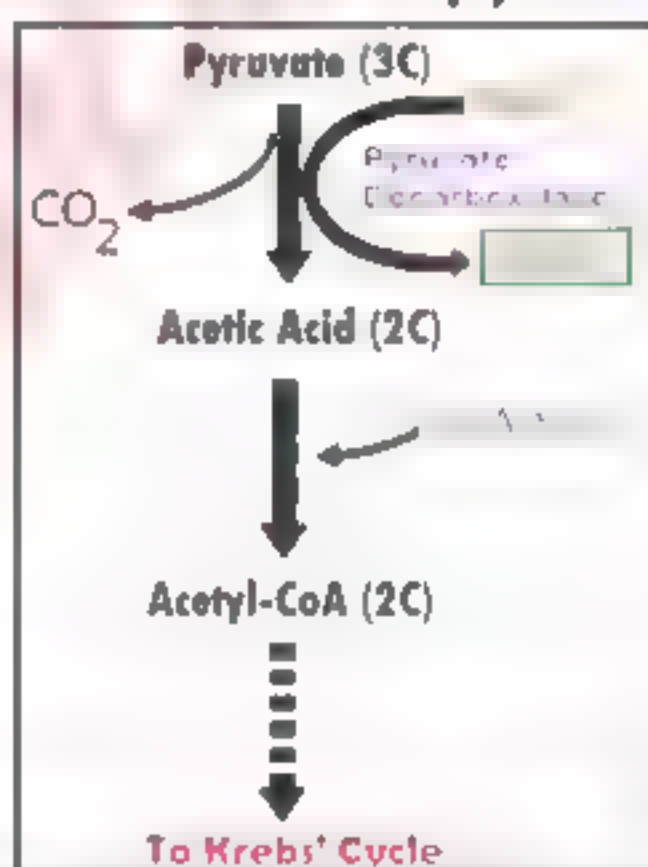Fructose-6-phosphate is changed to fructose-1,6-bisphosphate by: **14**
(a) Phosphoglycerate
(b) Phosphatase
(c) **Phosphofructokinase**
(d) Enolase

How may ATP will be produced during the production of one molecule of acetyl-CoA from one molecule of pyruvic acid?

(a) 3 ATP
(b) 5 ATP
(c) 8 ATP
(d) 38 ATP

Pyruvate (3C) → CO₂ + Acetic Acid (2C) → Acetyl-CoA (2C) → To Krebs' Cycle

Largest amount of phosphate bond energy is produced in the process of respiration during: **16**

(a) Glycolysis

(b) Krebs cycle

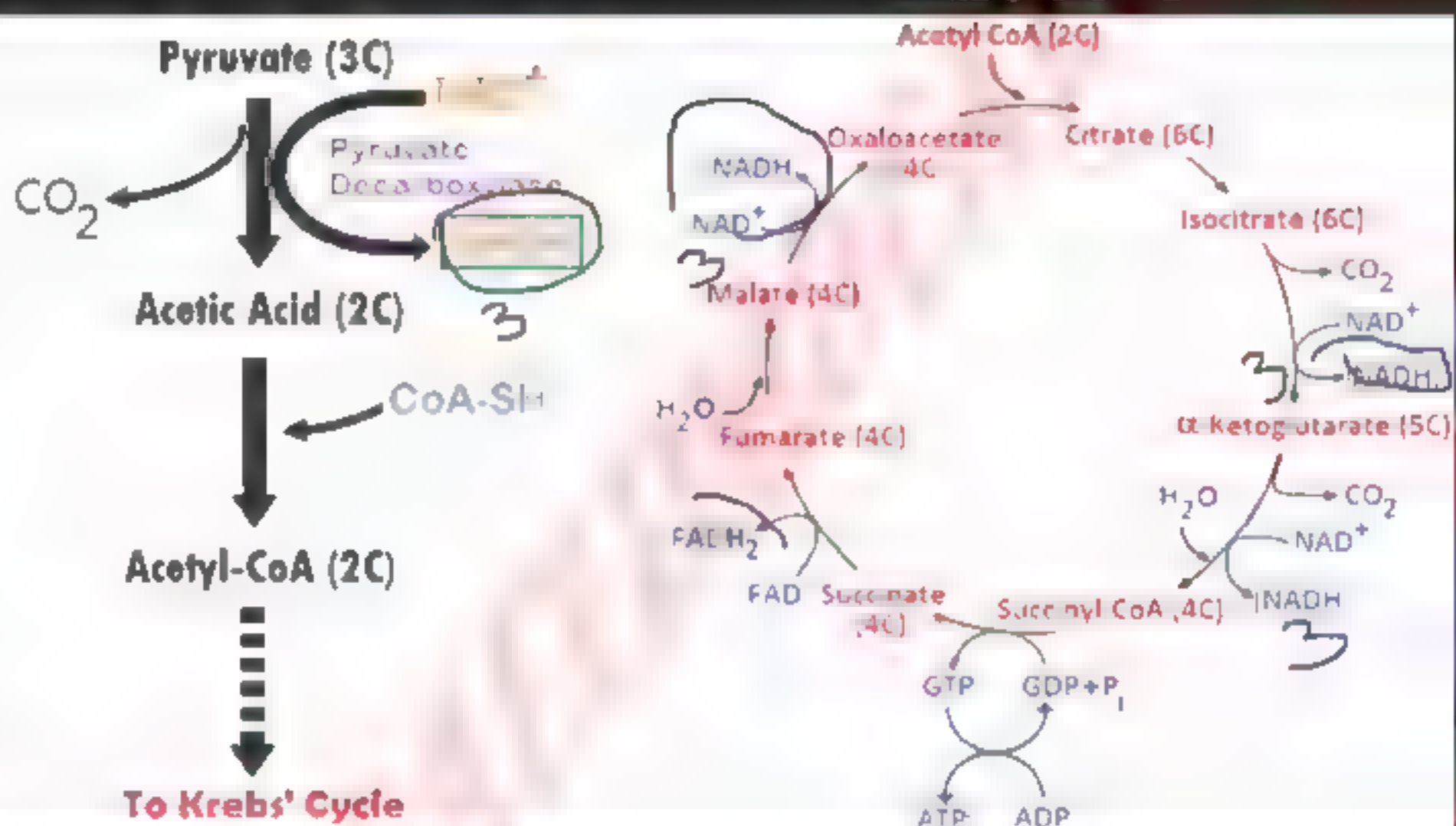(c) Anaerobic respiration

(d) None of the above

3NADH	3X3	9
1FADH$_2$	1X2	2
1GTP	1	1
		12 ATP

Number of ATP molecules which can be built on complete oxidation of pyruvic acid is:

17

(a) 6

(b) 2

(c) 15

(d) 30
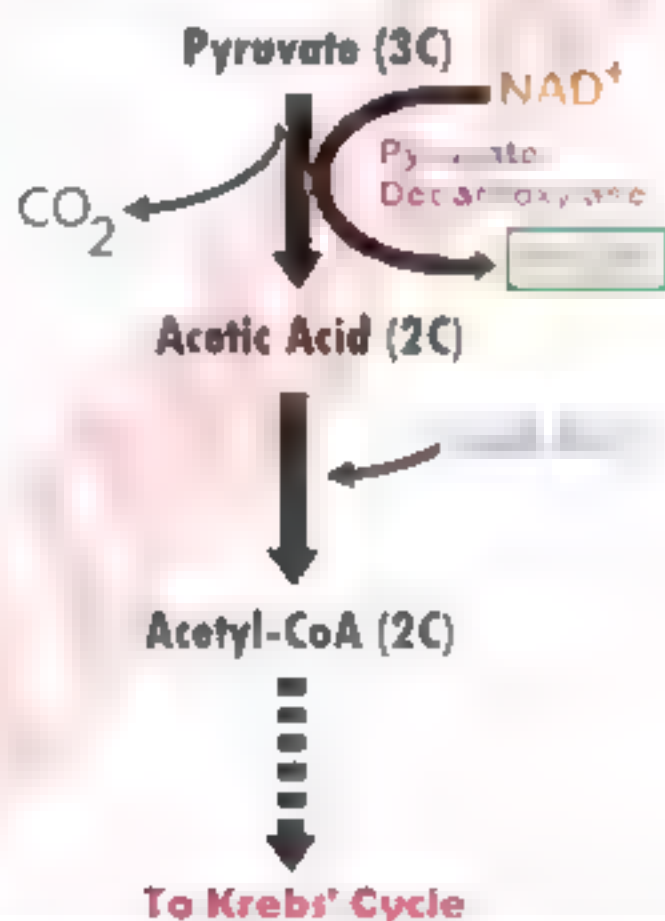
Pyruvate (3C)

CO_2

Pyruvate
Deca box...

Acetic Acid (2C)

CoA-SH

Acetyl-CoA (2C)

To Krebs' Cycle

Acetyl CoA (2C)

Oxaloacetate
4C

Citrate (6C)

NADH

NAD+

Isocitrate (6C)

CO_2

Malate (4C)

NAD+

NADH

H_2O

α Ketoglutarate (5C)

Fumarate (4C)

H_2O

CO_2

NAD+

FAD H_2

FAD Succinate
(4C)

Succinyl CoA (4C)

NADH

GTP

GDP+P$_i$

ATP   ADP

Number of carbon atoms available in acetyl-CoA is:

18

(a) 6

(b) 4

(c) 3

(d) 2

Pyruvate (3C)

NAD⁺

Pyruvate Decarboxylase

CO_2

Acetic Acid (2C)

Acetyl-CoA (2C)

To Krebs' Cycle

The energy yield as a result of total oxidation of one molecule of glucose during cellular respiration is sufficient to convert:

19

(a) 30 molecules of ADP to 30 molecules of ATP
(b) 32 molecules of ADP to 32 molecules of ATP
(c) 36 molecules of ADP to 36 molecules of ATP
(d) 38 molecules of ADP to 38 molecules of ATP

As compared to anaerobic respiration the energy gained **20** during aerobic respiration is _____ more:

(a) 6 times
(b) 12 times
(c) **18 times**
(d) 36 times

$2:36$

$1 \cdot 18$

Oxidation of pyruvate to CO_2 and H_2O occurs through: **21**

(a) Citric acid cycle

(b) Tricarboxylic cycle

(c) Krebs cycle

(d) All the above
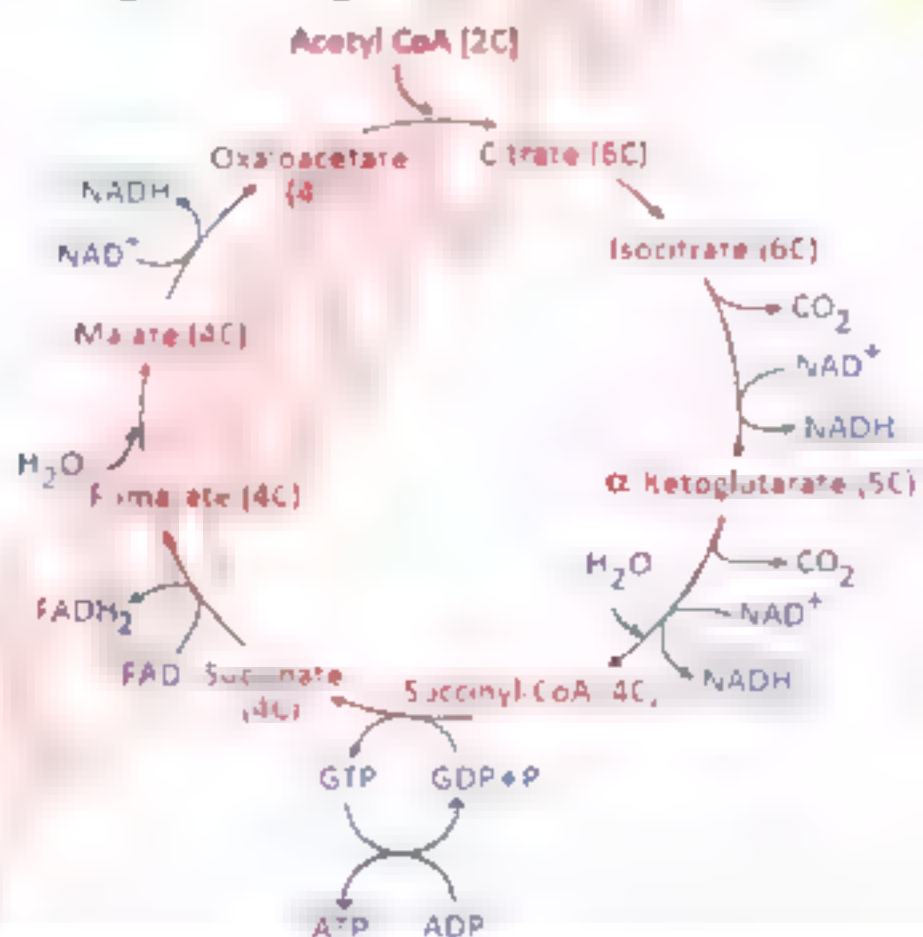
The terminal cytochrome in respiratory chain is: **22**
(a) Cytochrome b   (b) Cytochrome a_3
(c) Cytochrome a   (d) Cytochrome c
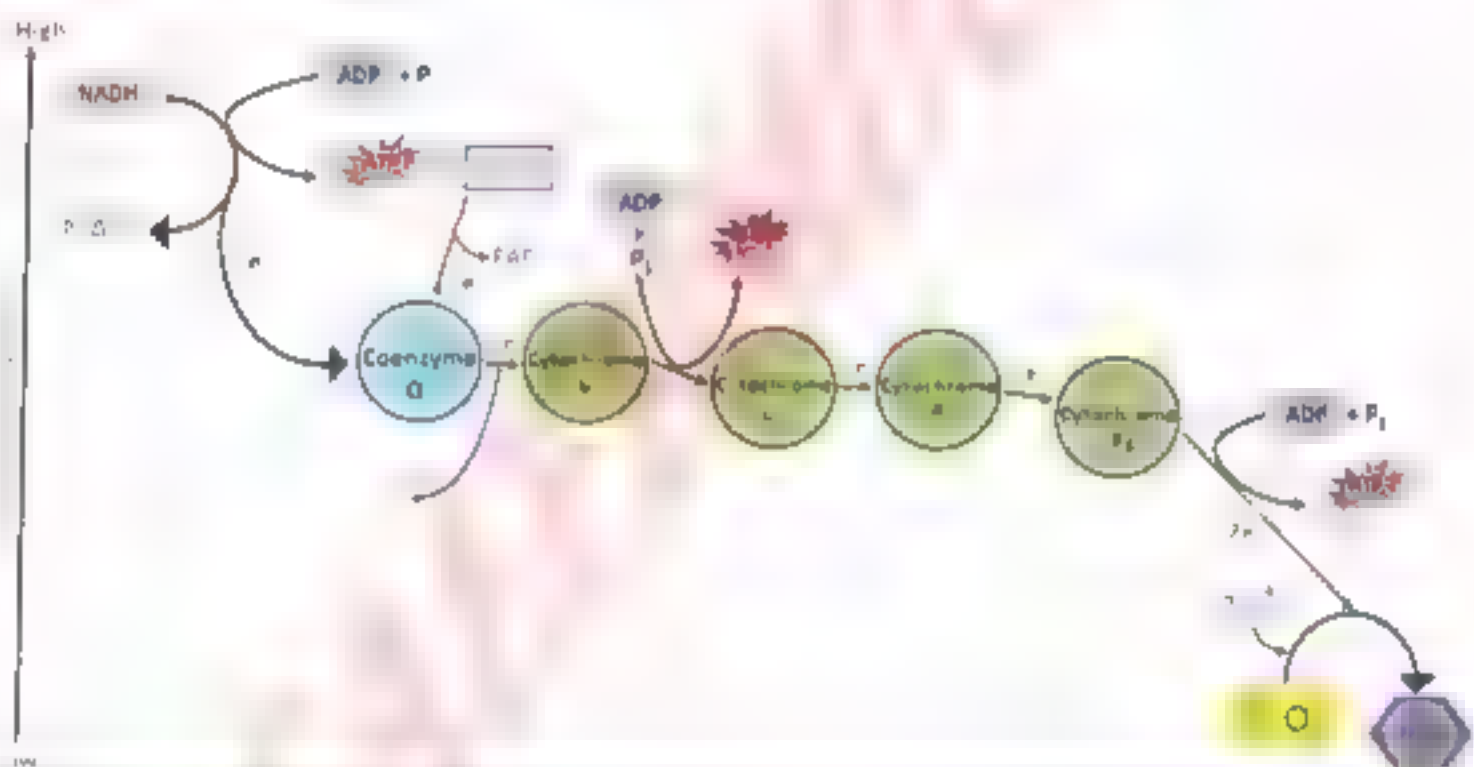
The net gain of energy from one gram mole of glucose during aerobic respiration is:

23

(a) 2 ATP

(b) 4 ATP

(c) 36 ATP

(d) 38 ATP

1 mole of glucose weighs 180g.

The first decarboxylation of aerobic respiration occurs during:

24

(a) Glycolysis

(b) Pyruvic acid oxidation

(c) Krebs cycle

(d) Respiratory chain

Pyruvate (3C)

CO_2

Pyruvate Decarboxylase

Acetic Acid (2C)

Acetyl-CoA (2C)

To Krebs' Cycle
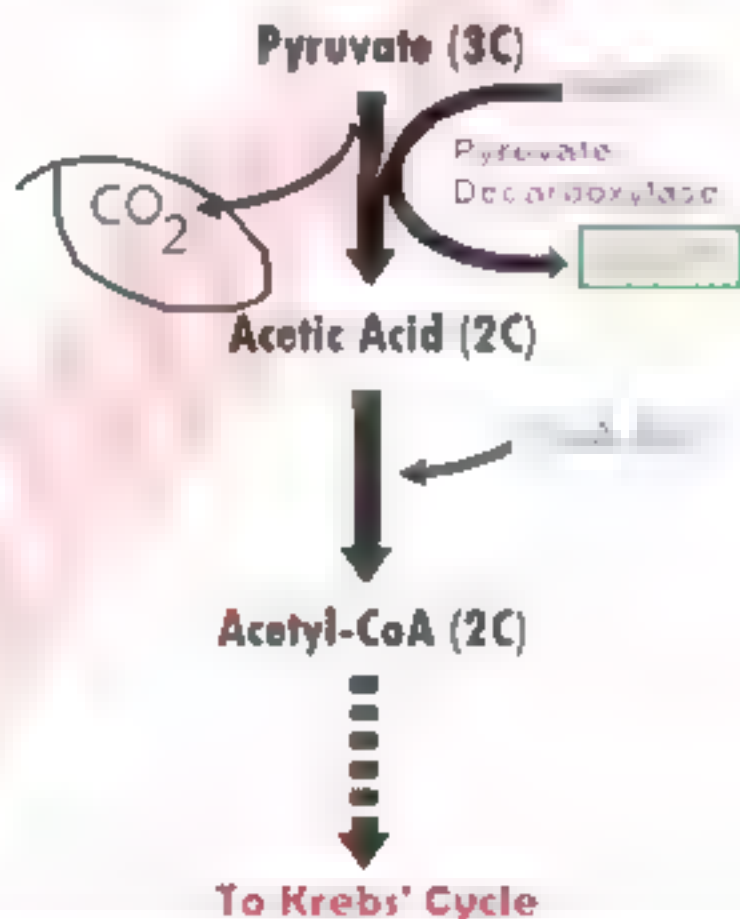
Total number of decarboxylation during aerobic respiration of one glucose:

25

(a) 2
(b) 4
(c) 6
(d) 8

Pyruvate (3C)

Acetyl CoA (2C)

CO_2

Pyruvate
Decarboxylase

Oxaloacetate
(4C)

Citrate (6C)

NADH

NAD$^+$

Isocitrate (6C)

Acetic Acid (2C)

Malate (4C)

CO_2

NAD$^+$

NADH

COA-SH

H_2O

Fumarate (4C)

α Ketoglutarate (5C)

Acetyl-CoA (2C)

FADH$_2$

H_2O

CO_2

NAD$^+$

FAD Succinate
(4C)

Succinyl CoA (4C)

NADH

GTP GDP+P$_i$

To Krebs' Cycle

ATP ADP
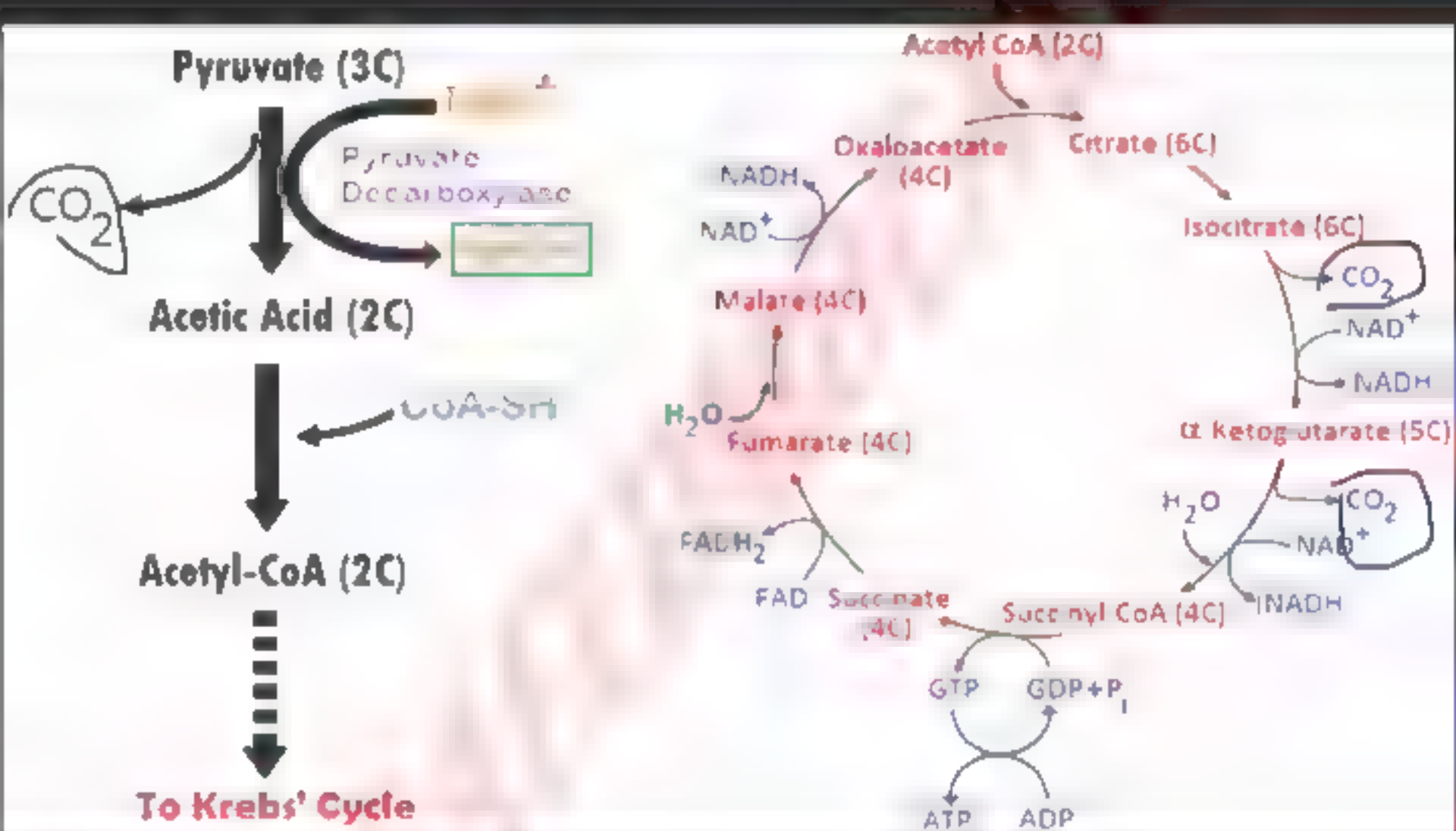
Water molecules released during pyruvic acid oxidations is:

26

(a) 0

(b) 1

(c) 2

(d) 4
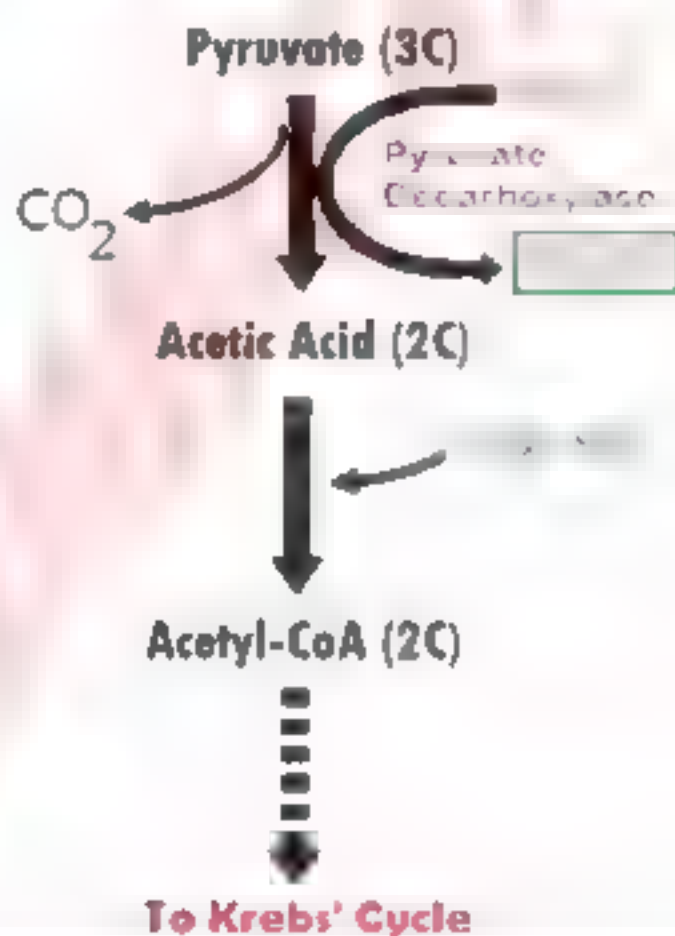
Pyruvate (3C)

Pyruvate Decarboxylase

CO_2

Acetic Acid (2C)

Acetyl-CoA (2C)

To Krebs' Cycle

First NADH of aerobic respiration is produced during:

(a) Glycolysis
(b) Pyruvic acid oxidation
(c) Krebs cycle
(d) Respiratory chain

27
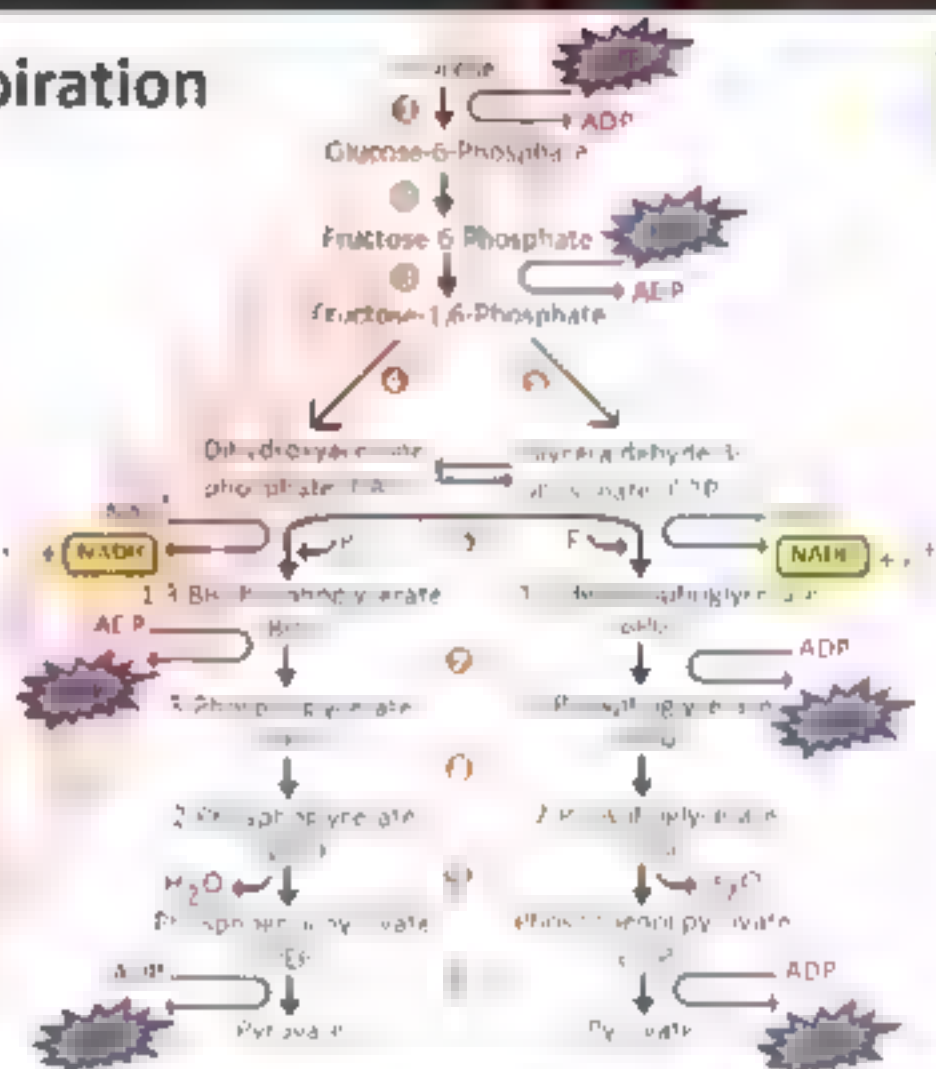
Which of the following enzyme catalyzes the first step of **28** glycolysis?

(a) Hexokinase
(b) Pyruvate kinase
(c) Isomerase
(d) Phosphofructokinase

The general term used for the anaerobic degradation of **29** glucose to obtain energy is

(a) Anabolism
(b) Oxidation
(c) **Fermentation**
(d) Metabolism

Cleavage of fructose-1,6-bisphosphate yields:

(a) Two aldoses

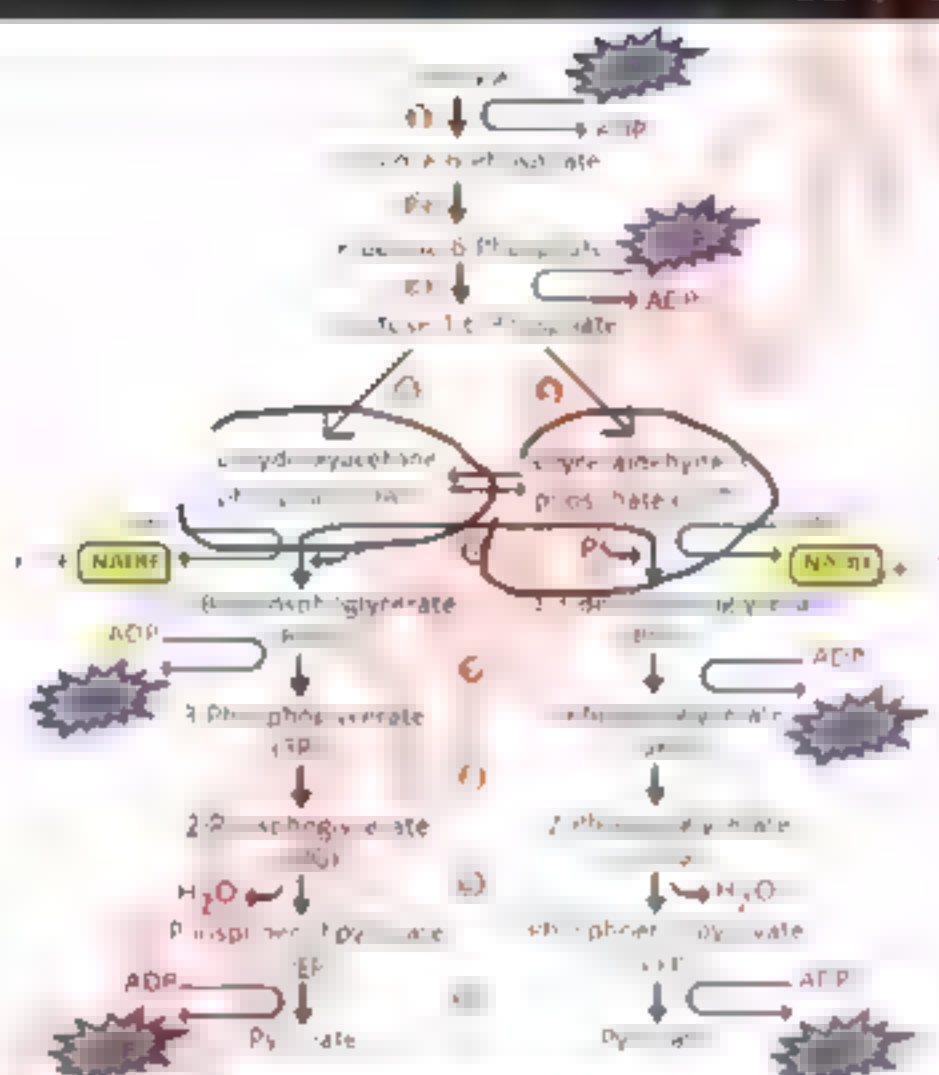(b) Two ketoses

(c) An aldose & a ketose
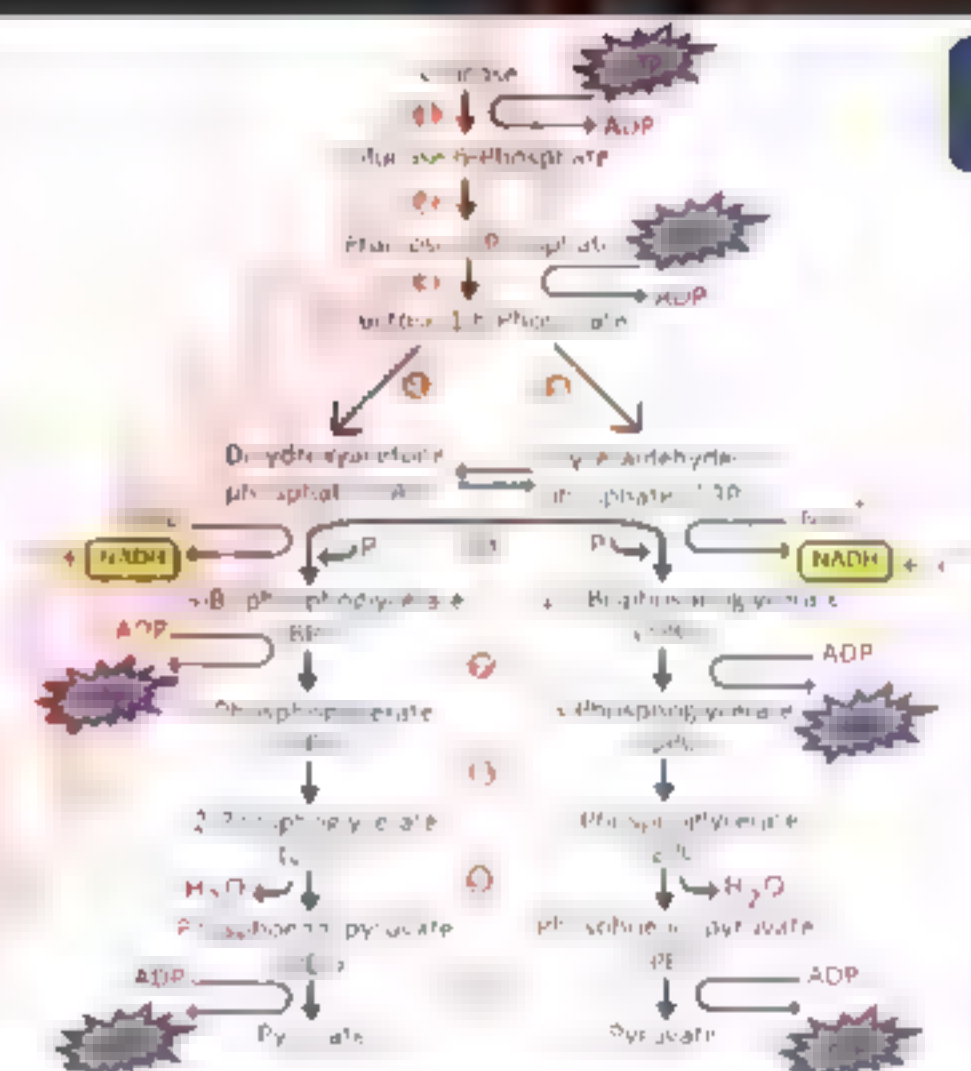
(d) Only a ketose

30

Cleavage of fructose-1,6-bisphosphate yields:
(a) Two aldoses
(b) Two ketoses
(c) An aldose & a ketose
(d) Only a ketose
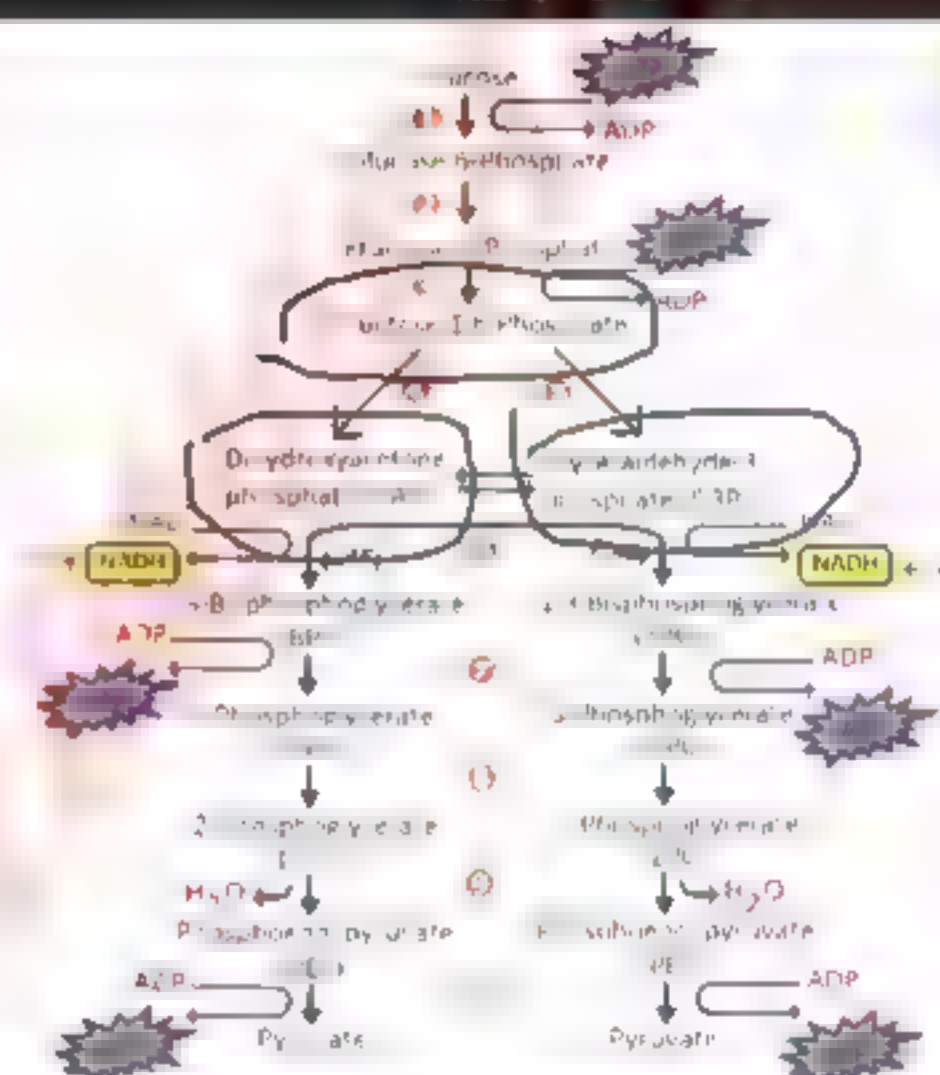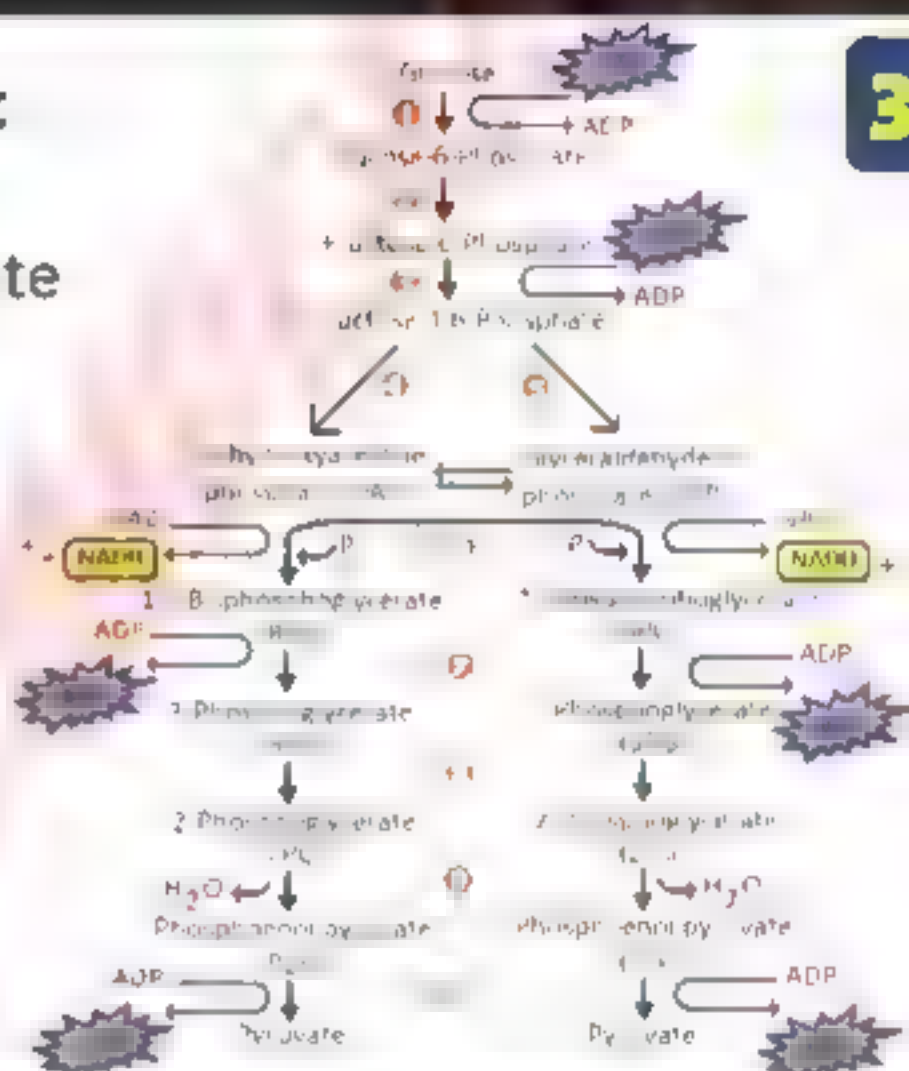
30

Dihydroxyacetone phosphate is rapidly and reversibly converted to

31

(a) Glyceraldehyde 3-phosphate
(b) 1,3-bis-phosphoglycerate
(c) Fructose-1,6-bisphosphate
(d) Fructose-6-phosphate

The substrate used in the last step of glycolysis is
(a) Glyceraldehyde 3-phosphate
(b) Pyruvate
(c) Phosphoenol pyruvate
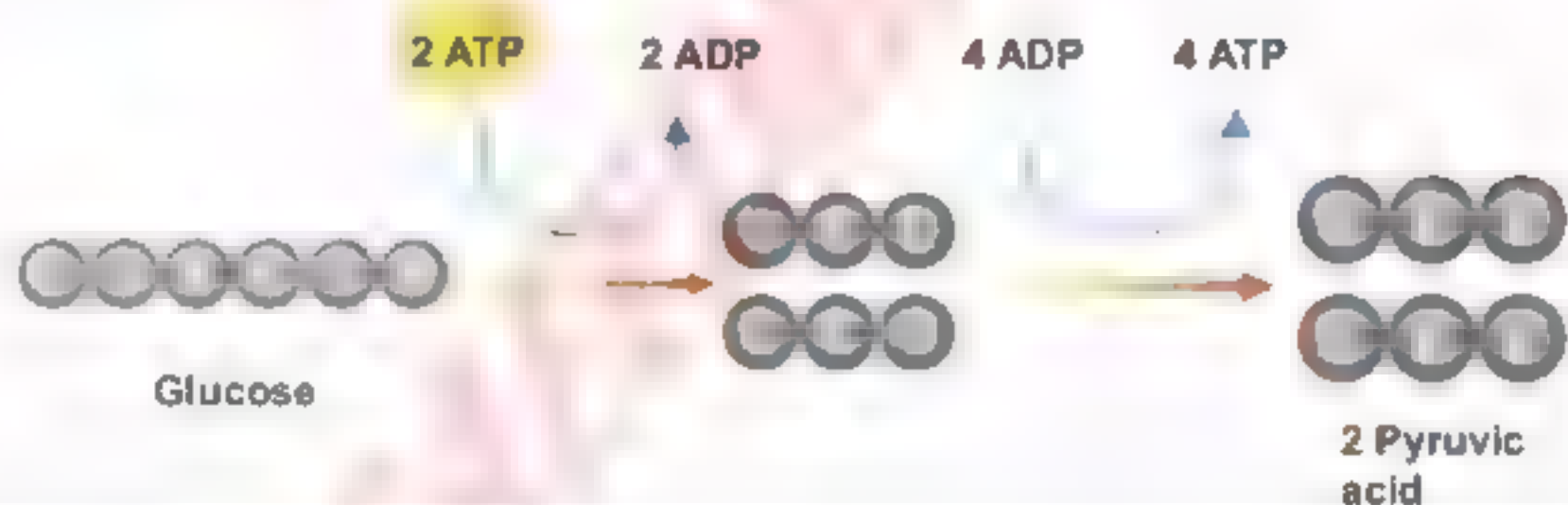(d) 1,3-bisphosphoglycerate

32

Glycolysis converts:

(a) Glucose into pyruvate

(b) Glucose into phosphoenolpyruvate

(c) Fructose into pyruvate

(d) Fructose into phosphoenolpyruvate

33

The product formed in the first substrate level phosphorylation in glycolysis is:

(a) Pyruvate
(b) 3-phosphoglycerate
(c) 1,3-bisphosphoglycerate
(d) 2-phosphoglycerate

34

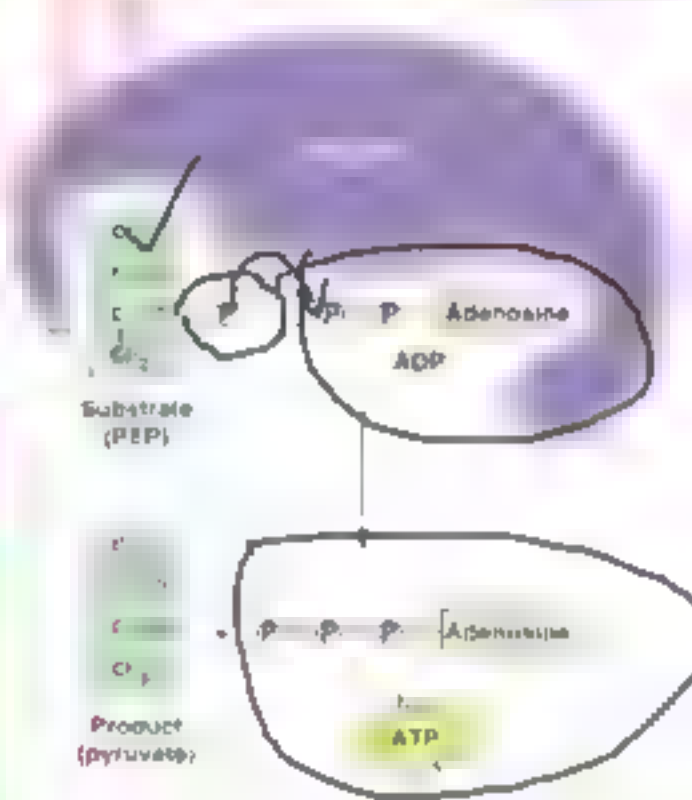The product formed in the first substrate level phosphorylation in glycolysis is:

34

(a) Pyruvate
(b) 3-phosphoglycerate
(c) 1,3-bisphosphoglycerate
(d) 2-phosphoglycerate

P_i

Substrate (PEP)

Product (pyruvate)

P_i P Adenosine
ADP

P P P Adenosine
ATP

The enzymes that take part in Krebs cycle are part of: **35**

(a) Mitochondria
(b) Inner mitochondrial membrane
(c) **Mitochondrial matrix**
(d) Cytoplasm

In glycolysis, phosphofructokinase (PFK) is inhibited by: **36**
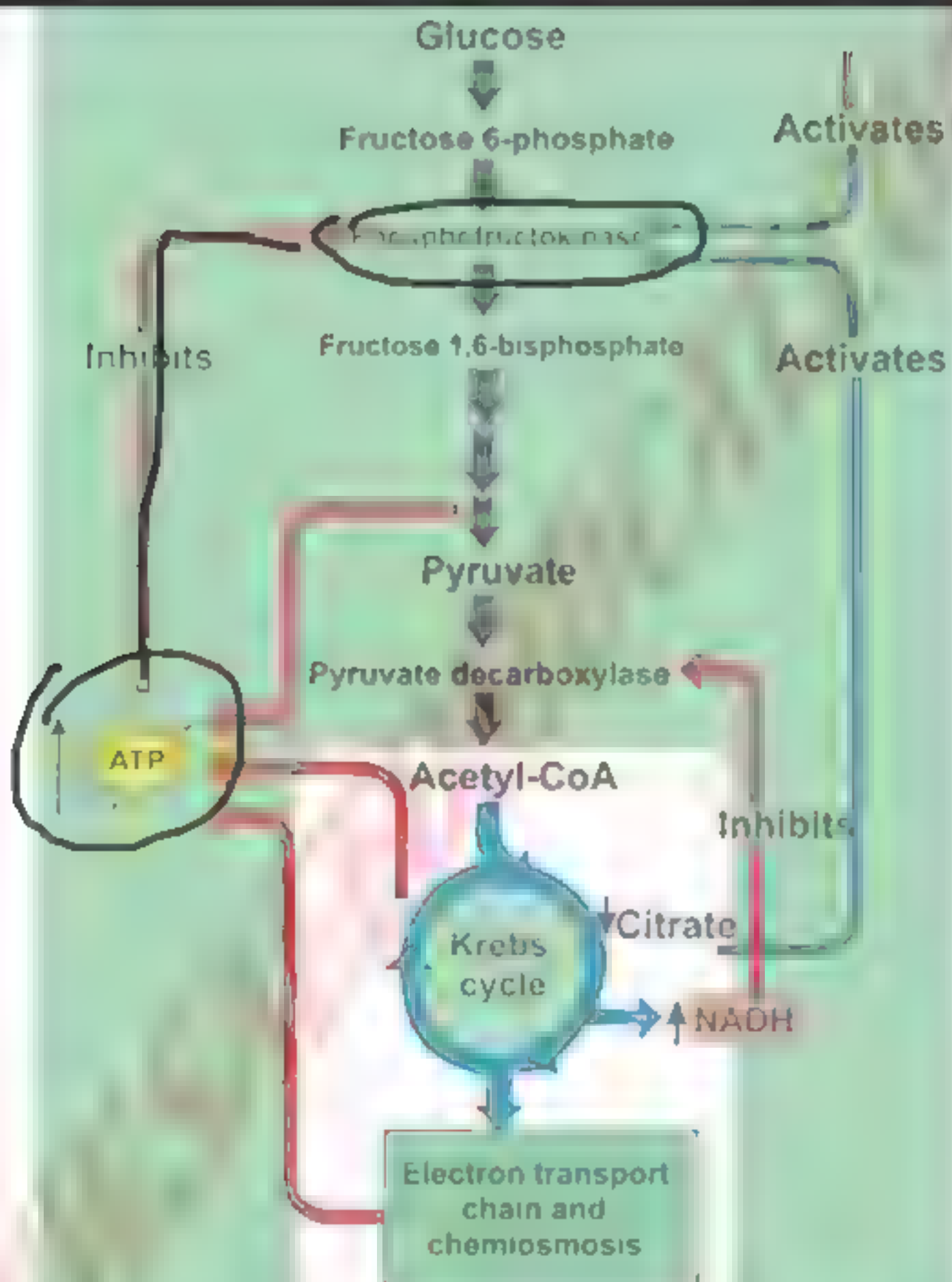(a) NADH
(b) ATP
(c) Fructose-1,6-bisphosphate
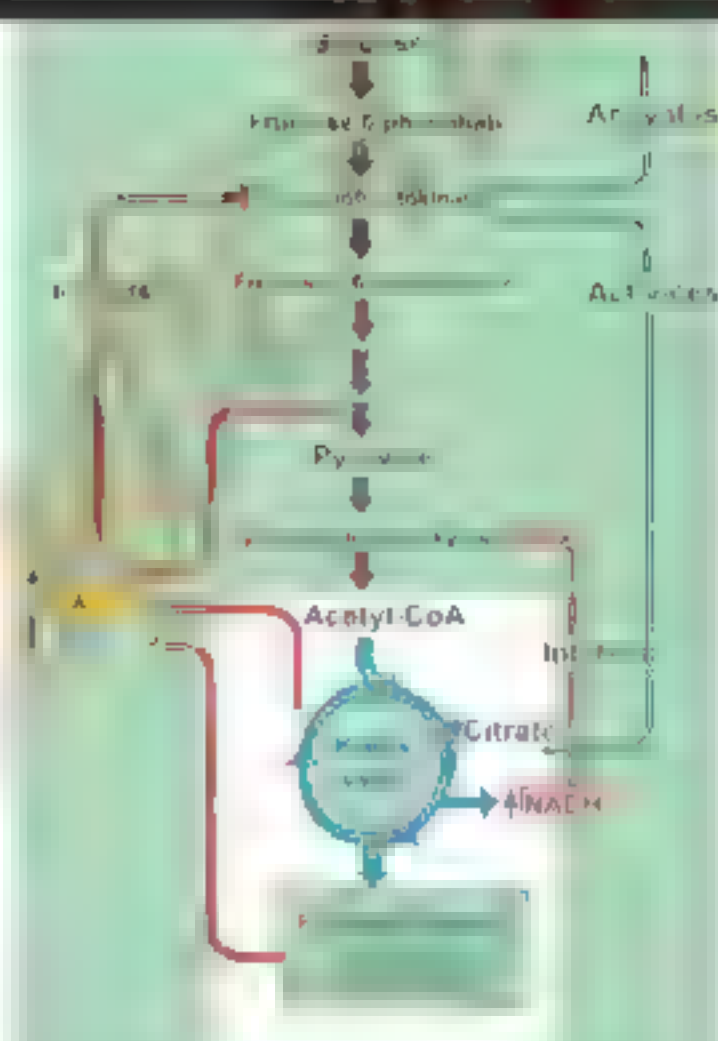(d) Fructose-6-phosphate

Glucose

Fructose 6-phosphate

Phosphofructokinase

Activates

Inhibits

Fructose 1,6-bisphosphate

Activates

Pyruvate

Pyruvate decarboxylase

ATP

Acetyl-CoA

Inhibits

Krebs cycle

Citrate

NADH

Electron transport chain and chemiosmosis

The pyruvate decarboxylase is inhibited by:

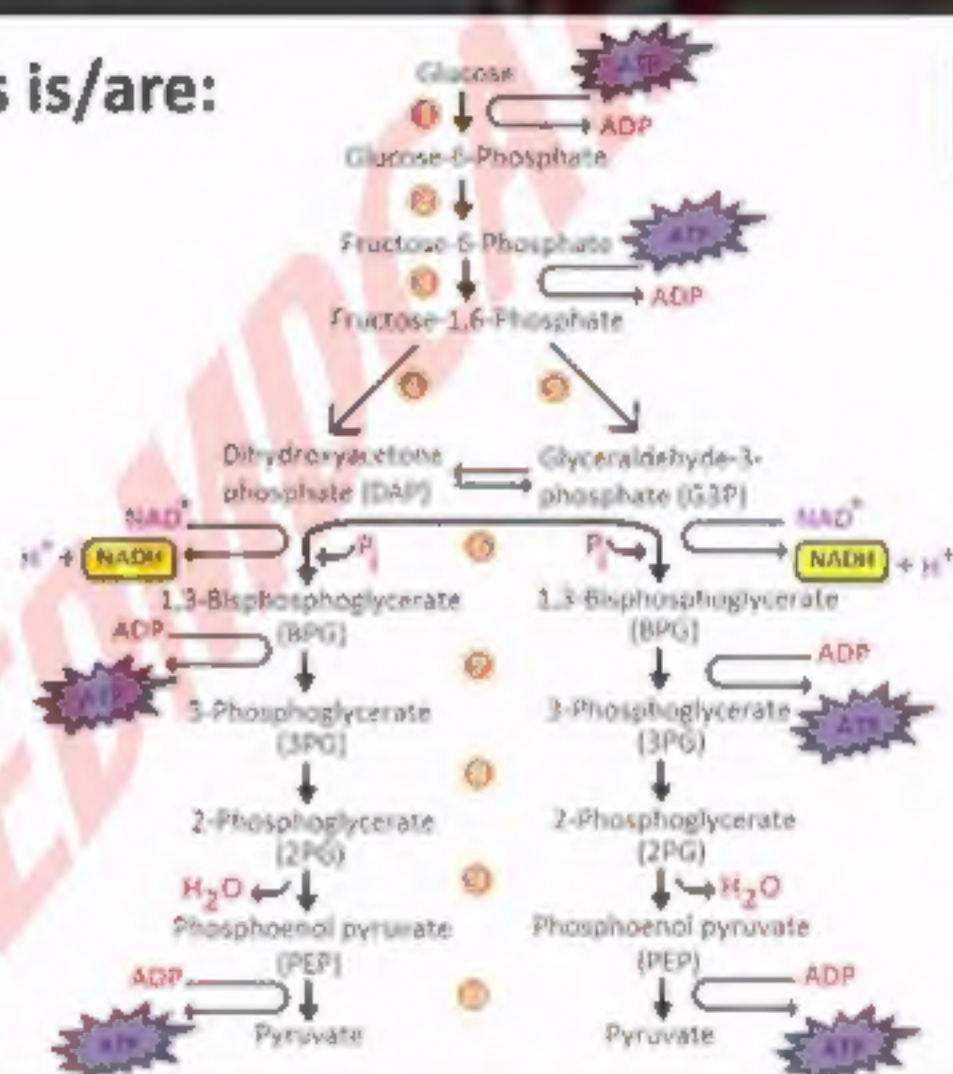(a) NADH
(b) CO_2
(c) ATP
(d) Acetyl-CoA

37.

...te decarboxylase
...by:

...oA
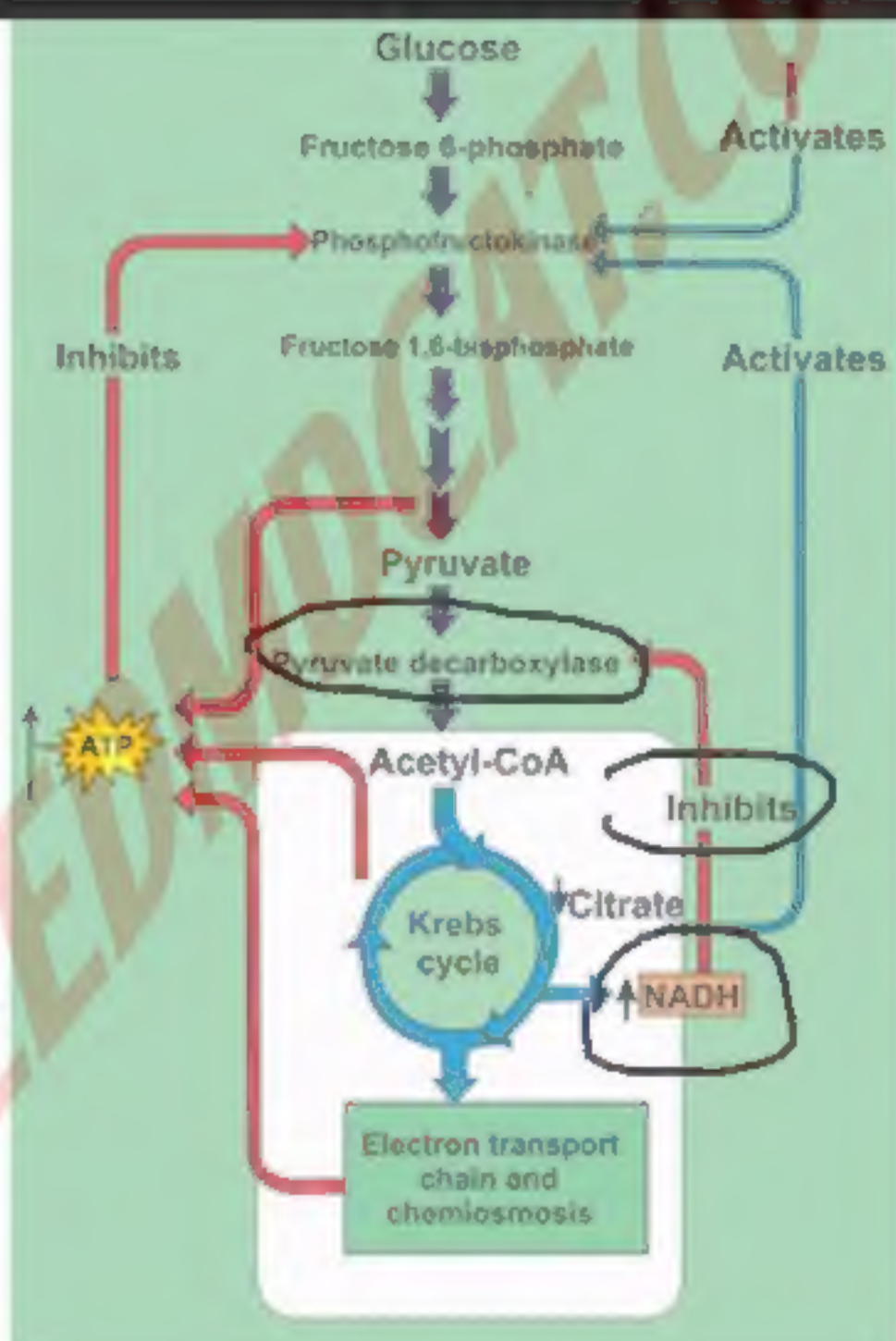
The products of glycolysis is/are:

(a) Pyruvate

(b) NADH

(c) ATP

(d) All the above

38

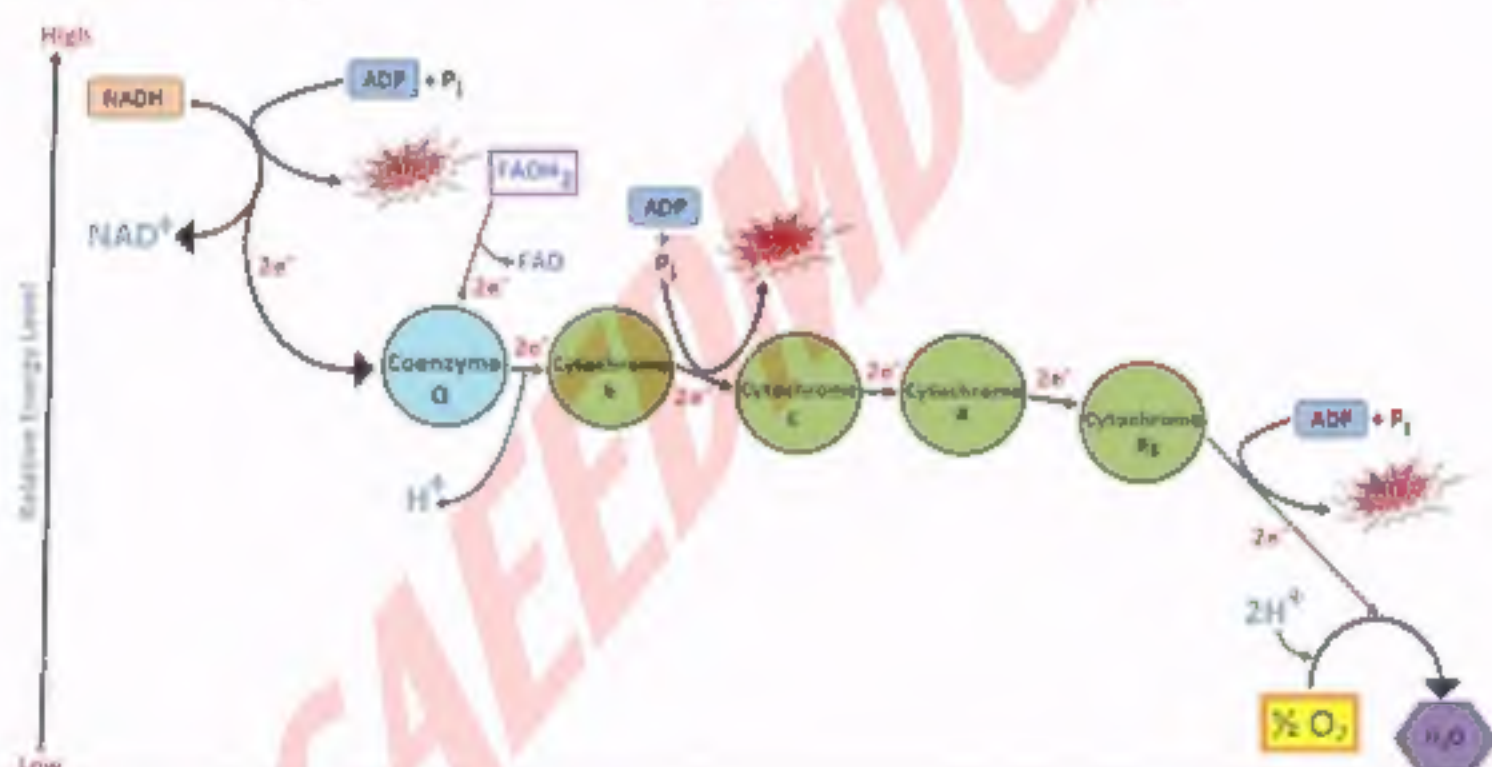**During respiratory chain, NADH is oxidized by:** **39**
(a) Cytochrome b
(b) Cytochrome a
(c) Molecular O_2
(d) Coenzyme Q

Which of the following is wrong with respect to the Krebs cycle?   **40**

(a) Acetyl-CoA combines with oxaloacetate to form citrate

(b) NAD^+ is reduced to form NADH

(c) $FADH_2$ accepts two electrons in order to form FAD

(d) All of the above are correct